



STAFFORDSHIRE COUNTY COUNCIL.

Annual Report

OF THE

MEDICAL OFFICER *of* HEALTH

W. D. CARRUTHERS, M.B., D.P.H.

For the Year 1927.

STAFFORD:

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Annual Report of the Medical Officer of Health.

PRELIMINARY NOTE.

The Annual Report for 1927 only deals with the year under review and is, therefore, much smaller than the Survey Report. The vital statistics continue to be favourable and are slightly lower than those for England and Wales as a whole, except the infant mortality rate which is a little higher, this being chiefly due to a severe outbreak of whooping cough in one section of the County. In 1927 a few cases of smallpox occurred, but the disease was soon got under control and did not spread. The other notifiable diseases were about normal, but on the other hand whooping cough and measles were severe in certain thickly-populated areas.

During the year, owing to the extension of Wolverhampton, the Administrative County became less by 3,580 acres and lost a population of 18,974.

In the appropriate section of the Report details are given of the activities of Local Authorities with regard to their water supplies and the prevention of pollution of water courses in their districts. Whilst much has been accomplished, it is unfortunately true to say that there is still great pollution of the streams, particularly in the industrial areas; this matter is now engaging the close attention of those concerned, so that we may hope for a considerable improvement in the course of a few years.

In the rest of the Report attention is invited to the account of the work undertaken with regard to safeguarding the milk supply of the area; to the work of the County Laboratory and the large section of the Report devoted to maternity and child welfare.

STAFFORDSHIRE COUNTY COUNCIL.

Annual Report of the Medical Officer of Health.

Summary of Statistics.

1.—GENERAL STATISTICS.

Area of Administrative County	...	... (acres)	693,977
Population (for Death Rate)	...	... (1927)	714,910
Population (for Birth Rate)	...	.. (1927)	716,510
Assessable Value at 31st December, 1927	...		£3,229,856
Sum represented by a penny rate...	...		£13,457 14 8

2.—EXTRACTS FROM VITAL STATISTICS OF THE YEAR.

	Total.	M.	F.		
Births (Legitimate) ...	13,405	6,884	6,521	} Birth-rate	... 19.3
(Illegitimate) ...	451	241	210		
Deaths...	8,540	4,458	4,082	Death-rate	... 11.9
Number of women dying in, or in consequence of, childbirth	...	...	...	From sepsis	... 25
	...	...	...	From other causes	27
Deaths of infants under one year of age per 1,000 births :—					
Legitimate, 79 ; Illegitimate, 104 ; Total, 80.					
Deaths from Measles (all ages)	...	...	...	...	57
„ „ Whooping Cough (all ages)	...	...	...	...	168
„ „ Diarrhoea (under two years of age)	...	...	...	..	90

AREA AND POPULATION.

I have this year to record an alteration both in the area and population of the Administrative County. By the extension of the County Borough of Wolverhampton, which took effect on April 1st, 1927, the area of the County has been reduced by 3,580 acres, and by an estimated population of 18,974.

The following are the details of the aggregate figures :—

	<i>Area in Acres.</i>	<i>Estimated Population.</i>
Heath Town U.D. ...	885	... 13,082
Cannock R.D. (Part)		
Bushbury	1,635	... 3,071
Seisdon R.D. (Part)		
Upper Penn (Part)	509	... 2,650
Wrottesley (Part) .	551	... 171

The Borough of Newcastle-under-Lyme was extended on October 1st, 1927, by the inclusion of parts of the parishes of Keele and Clayton from the Newcastle Rural District. This alteration does not, of course, affect the area of the Administrative County. The details are as follows :—

	<i>Area in Acres.</i>	<i>Estimated Population.</i>
Newcastle R.D. (Part)		
Keele (Part) ...	251	... 15
Clayton (Part) ...	599	... 56

The populations of the various districts used in calculating the birth and death-rates have again been supplied by the Registrar-General, those of the various districts affected by the Wolverhampton and Newcastle Extension Orders as shown in the general mortality tables at the end of the Report being adjusted for calculation of birth and death-rates. The births and deaths are inclusive of those registered before the transfers took place.

With the exception of one district, namely, Lichfield Rural, a single population is shown, and this is applicable to both births and deaths.

The “Standardising Factor,” which is supplied by the Registrar-General for correcting the death-rates, has been used in districts with a population of over 10,000. The rates produced by this method are strictly comparable, the factor being based on the age and sex of the population as indicated at the last Census.

The estimates of population as at 30th June, 1927, which are now provided, have been based on the adjusted 1921 figures, after allowance for the varying rates of natural

increase as evidenced by the births and deaths in each area and of migration as indicated from other sources of information, such as the changes in the numbers on the Parliamentary Register and the migration returns obtained by the Board of Trade.

In the following table, the census population of the Administrative County for 1921, and the estimated population to the middle of 1927, are set forth :—

	Census, 1921	Estimated Population as at middle of 1927.
Urban ..	492,333	500,720
Rural.. ..	218,532	* 210,580
Total ..	† 710,865	711,300

* The estimated population for the birth-rate in the rural districts is 212,180.

† The Census population of the Administrative County as now constituted is less than this figure by about 46,000, owing to the absorption of certain districts in the extended County Borough of Stoke-on-Trent referred to in my Annual Report for 1922, and the extension of Wolverhampton County Borough.

BIRTHS.

The births registered in the Administrative County numbered 13,856, compared with 14,535 the previous year, the number in the urban districts being 10,027, and in the rural districts 3,829, compared with 10,481 and 4,054 respectively.

In comparing the figures for 1927 with those of previous years. however, it should be borne in mind that the estimated population of the Administrative County is 11,590 less than it was for last year.

The mean birth-rates in the whole Administrative County and in the urban and rural districts respectively for seven quinquennial periods and for the past four years are shown in

the following table, in which corresponding rates in England and Wales are included :—

DISTRICTS.		BIRTH-RATE PER 1,000 OF POPULATION.										
		5 yrs. 1889- 1893.	5 yrs. 1894- 1898.	5 yrs. 1899- 1903.	5 yrs. 1904- 1908.	5 yrs. 1909- 1913.	5 yrs. 1914- 1918.	5 yrs. 1919- 1923.	1924.	1925.	1926	1927
Staffordshire	Combined Urban and Rural ..	33.6	33.2	32.5	30.3	27.8	24.0	24.1	21.6	21.0	19.9	19.3
	Urban	35.5	34.7	33.6	31.5	29.2	25.0	25.0	22.0	21.7	20.4	19.9
	Rural	30.2	30.5	30.2	27.0	24.4	21.6	22.0	20.4	19.5	18.7	18.0
England and Wales ..		30.8	29.7	28.7	26.9	24.5	20.4	21.3	18.8	18.3	17.8	16.7
Large Towns in England		31.5	30.7	29.7	27.8	25.2	*20.9	22.0	19.4	18.8	18.2	17.1

* 4 years.

DEATHS.

The number of deaths in the Administrative County amounted to 8,540, the number in the urban districts being 6,076, and in the rural districts 2,464.

In the following table comparative rates for seven quinquennial periods and for the past four years are given, together with corresponding figures for the country as a whole, and for large and small towns throughout England :—

DISTRICTS.		DEATH-RATE PER 1,000 OF POPULATION.										
		5 yrs. 1889- 1893.	5 yrs. 1894- 1898.	5 yrs. 1899- 1903.	5 yrs. 1904- 1908.	5 yrs. 1909- 1913.	5 yrs. 1914- 1918.	5 yrs. 1919- 1923.	1924.	1925.	1926.	1927
Staffordshire	Combined Urban and Rural	18.1	16.9	16.1	14.6	14.1	15.0	12.3	11.4	12.0	10.9	11.9
	Urban	18.9	17.5	16.6	15.1	14.7	15.5	12.6	11.5	12.3	10.9	12.0
	Rural.. ..	16.8	15.7	15.1	13.4	12.7	13.8	11.6	11.2	11.4	10.9	11.7
England and Wales		19.1	17.4	16.9	15.3	13.9	15.2	12.5	12.2	12.2	11.6	12.3
Large Towns		21.0	19.0	18.2	15.8	14.3	15.5	12.6	12.3	12.2	11.6	12.2
Smaller Towns.. ..		17.6	15.9	15.7	14.9	13.6	14.1	11.5	11.2	11.2	10.6	11.3

The death-rate per 1,000 of the population for this year is 11.9, whilst that for the country as a whole is 12.3. On referring to the Table for previous years, it will be noted that except during the quinquennial period, 1909 to 1913, the death-rate in this County has been slightly lower than that for England and Wales during the last 38 years.

In the following Table I have shown the chief causes of death for the last five years, the number given for 1927 being approximately 72% of the total deaths :—

TABLE SHOWING CHIEF CAUSES OF DEATH.

	1923	1924	1925	1926	1927
*Zymotic Diseases	540	271	604	337	386
Influenza	166	427	325	185	532
Tuberculosis of Respiratory System	497	497	530	497	465
Tuberculosis, other forms ...	172	154	143	139	156
Cancer, Malignant Disease ...	716	639	790	785	803
Cerebral Hæmorrhage	485	487	542	464	465
Heart Disease	900	968	1053	1054	1047
Arterio-sclerosis	194	205	238	229	315
Bronchitis	644	687	648	544	650
Pneumonia	706	788	809	660	865
Congenital Debility &c.	482	551	521	496	453

* Enteric Fever, Measles, Small-pox, Scarlet Fever, Whooping Cough, Diphtheria and Diarrhœa.

The chief cause of death in 1927, as in the previous five years shown in the table, was heart disease. Pneumonia is the next important cause, and then follows cancer, diseases of the blood vessels, bronchitis and tuberculosis, in the order given. These annual returns naturally bring prominently forward the question of the prevention of disease. In a handbook of suggestions on health education, recently issued by the Board of Education, valuable hints are given to teachers as to how they should teach this subject, and when they are generally adopted hygiene should find its true place in the scheme of education, and such teaching learnt during school days will be bound to have an enormous effect for good in later life. In the handbook referred to great stress is laid upon the necessity of acquiring healthy habits of life in the earliest years. It may be objected that in this way only the younger generation are thought of; but, according to an old proverb, man is a

bundle of habits, and it has been said that men do more things through habit than through reason. In later years we are not so receptive of instruction with regard to personal health, and the ordinary man prefers to rely upon experience, often dearly bought. What, therefore, is the best way of obtaining the interest and co-operation of adults in the prevention of disease? No one wishes to be regarded as a valetudinarian and the average individual is frankly not interested in the subject unless seized by illness. It seems, therefore, that formal lectures on health propaganda are unlikely to give the results hoped for by enthusiasts on this subject, and individual instruction at the homes by Health Visitors is preferable. Health Visitors are itinerant teachers, and the importance of their work is now being slowly recognised by the public. Their training is long and arduous, and under recent regulations it has been made increasingly so, but in view of the importance of their work this is clearly desirable, and it is hoped that every effort will be made to induce highly-educated women to take up this work.

In addition to instruction in hygiene, I think there is much to be said for the scheme of periodical medical examination started by American Life Insurance Companies. From their point of view this was a business measure, but as its object is the prevention of the development of disease, it surely should be welcomed by all. I do not refer to acute disease, but more particularly to the many chronic diseases which have such an insidious onset that they become far advanced before medical assistance is sought. If generally adopted such a scheme would soon change the outlook of the average man towards disease and arouse his interest in its prevention. Few could anticipate, when the medical inspection of school children began 20 years ago, what an important factor this measure would become in laying down the foundation for sound health in the early years of life by finding out and treating incipient disease as well as that which actually existed. In the course of its development it was soon found how inadequate the then existing means of treatment were for many conditions commonly found, and there is little doubt that a similar experience would result from the periodical medical examination in later years. It would also greatly stimulate investigations into the beginnings of disease. The practice of medicine would have to adjust itself to this changed outlook, and as much prominence would then be given to the prevention as to the cure of disease. Naturally, such a change could only be made

gradually, but there is little doubt it will come about when it is sufficiently realised how much time and money is lost yearly from sickness that might have been prevented, to say nothing of the loss of life involved.

Water Supplies.

In the following paragraphs will be found an account of the work undertaken during the year by various Local Authorities to improve the water supply of their areas as shown in the Annual Reports of the Medical Officers of Health, together with comments made by the Medical Officers where improvements in the water supply are urgently needed.

AUDLEY U.D.—“ A subsidiary tank of 100,000 gallons capacity, at Talke, was completed in March. The area concerned was thus provided with a continuous supply of water.

“ In 1926 the water from a well near Butt Lane was found on analysis to be quite unfit for drinking purposes. Arrangements were put in hand for a supply from the main to be provided for the group of cottages concerned, but work had not been started by the end of 1927.”

BIDDULPH U.D.—“ After much deliberation the Council decided to sink for water in Spring Lane, Biddulph, with a view to the augmentation of the present supply.

“ It is confidently expected that during the year sufficient water will be obtained to ensure an adequate supply for all parts of the district.

“ No contamination of drinking water has come before my notice during the year.”

BILSTON U.D.—“ The outstanding feature of the year's work in relation to water supply was the completion of the extensions at the Bratch, providing modern oil engine plant in duplicate, housed in a new building, together with a duplicate pumping main, and an additional service reservoir doubling the storage capacity.

“ The whole of these extensions have been completed at an estimated cost of £72,000 and were opened on 28th September, 1927, by Sir H. Kingsley Wood, M.P., Parliamentary Secretary of the Ministry of Health.

“ The supply of water is abundant for all purposes, and the certificate of the County Analyst (Mr. W. T. Jones) proves the water to be pure and of excellent quality.”

BROWNHILLS U.D.—“ Three samples of water were taken from wells during the year :—

“ (1) Draw well supplying five houses, Watling Street, Norton Canes. Result—Water unfit for drinking purposes ; well closed and a new well sunk.

“ (2) Draw well supplying two houses, Watling Street, Norton Canes. Result—Water fair, but not above suspicion ; well cleaned out, re-puddled and bricked, top of well raised above adjoining ground level.

“ (3) Draw well supplying Red Lion Farm and house adjoining at Little Norton, Norton Canes. Result—Water fit for drinking purposes.”

CANNOCK U.D.—“ The South Staffordshire Water Company have a reservoir in the district at an altitude of 777 feet. This did not prove high enough to maintain a good supply at Cannock Wood. For this and other reasons a new reservoir is to be provided.

“ During the year taps were fixed over sinks in 23 houses where the supply had been from pillar taps or pumps in the yard.”

QUARRY BANK U.D.—“ In connection with the Mears Coppice water supplies, the situation should be found to be considerably simplified by the fact that the tenants of most of the cottages have now purchased the properties from the ground landlord, and in any future action the Council will now be able to deal direct with the respective owners.”

RUGELEY U.D.—“ This is in the same condition as last year. A scheme for obtaining a more abundant supply is now under consideration, and I hope nothing will occur to prevent it materialising.”

STAFFORD BOROUGH.—“ The new reinforced concrete reservoir to contain one million gallons of water, which is being constructed on a site adjoining the existing reservoir is nearing completion, and it is anticipated that it will be brought into commission in May or June next.

“ Six houses at Doxey were connected up to the town main during the year. This leaves seven still depending on well water.”

STONE U.D.—“ A pure and constant supply is obtained from the Council's Waterworks. During the year a second 6in. supply main has been laid from the reservoir via the Red Hill to the town and connected to the existing distribution mains at the opposite end of the town to the original main ; this has given a much better pressure and has made the supply more secure in case of any accident to the original main.”

TAMWORTH BOROUGH.—“ Extensions of mains have been proceeding during the year to cope with the demands of the district where houses are likely to be built.”

TETTENHALL U.D.—“ The Wolverhampton Corporation Mains have been extended during the year as follows :—

“ Finchfield Hill, 126 yards, 3in. main.

“ Wrottesley Road, 27 yards, 3in. main.

“ Wood Road Housing Site, 413 yards, 3in. main.

“ Five houses previously dependent on well water have been provided with a piped supply.”

UTTOXETER U.D.—“ The town's water supply continues to be entirely satisfactory. Progress is being made in dispensing with outside taps and standposts, and separate connections are now being laid to serve each house. More water is now being used for trade purposes and a considerable number of additional baths have been installed, thus using more water.”

WEDNESBURY BOROUGH.—“ The water supply is provided by the South Staffordshire Waterworks Company, Limited.

“ The water is of good quality and the supply is constant.

“ It was pointed out in last year's Report that the area of the Delves was badly supplied ; since then a water main has been extended to that area.”

WILLENHALL U.D.—“ The water supply is obtained from the adjoining Borough of Wolverhampton. The character of the water was satisfactory on the whole, but complaints were received at various times with respect to the presence of foreign matter in the water. The matter was referred to the Water Engineer and the mains flushed at frequent intervals and samples of the water were submitted for analysis and found to be satisfactory.”

CANNOCK R.D.—“ In 1926 I reported on the water supply to houses in the Parish of Dunston, and during this year the Stafford Corporation extended their water mains, and the houses on the line of mains have been connected.

“ I made a report on the water supply to nine cottages at Crateford, with a view to getting the water mains of the South Staffordshire Waterworks Company extended to supply them, but the cost was found to be prohibitive.”

CHEADLE R.D.—“ A supply of water for Hollington and Freehay has frequently been discussed, but so far the cost has been found to be prohibitive and no steps have yet been taken to improve matters in these places.”

GNOSALL R.D.—“ One further connection has been made to the Gnosall water mains during the past year, and the limit of supply for purely domestic purposes has now been reached. Gnosall Heath is somewhat inadequately supplied, and the same applies to the villages of Church Eaton, Woodseaves and parts of Norbury. In Church Eaton a satisfactory solution of the proposed supply has not yet been arrived at. In Norbury village a solution has for the time being been found which is adequate.”

LICHFIELD R.D.

The Surveyor, in his report, writes :—

“ *Armitage*.—A complete scheme for the supply of water to Armitage, Brereton and Longdon was submitted to the Council and approved, but was deferred at the Meeting on April 13th, 1928, when a resolution was required approving the final estimate for the scheme and to apply to the Ministry of Health for sanction to a loan. It was again considered at the Health Committee Meeting on April 27th, and postponed pending inquiries from the South Staffordshire Waterworks Company as to their terms for supplying Armitage, and also until after a joint meeting of the three Parish Councils had been held to consider the same. This matter therefore rests with the Health Committee and the Parish Councils.

“ *Slitting Mill*.—The supply of water from the Rugeley U.D.C. trunk main has continued much better since the position of the stand pipes was altered.

“ *Brereton*.—The temporary expedient of the Rugeley U.D.C. to improve the supply of water to the higher parts of Brereton has been partially successful, but there is no doubt a more copious supply is needed at Brereton. Attention has been given to the meters on private supplies and these have now all been put in order.”

MAYFIELD R.D.—“ The only available supply at Calton and the hilly parts of the district is stored rain water.”

SEISDON R.D.—“ At Codsall Wood eight samples of water from wells were analysed and found unsuitable for drinking purposes. Arrangements are in hand for extending the Wolverhampton Corporation's water mains to this district. Various properties have been connected to the existing mains throughout the district. Pattingham is still without a public water supply.

STAFFORD R.D.—“ In consequence of my report on the unsatisfactory conditions of the water supply in the Parish of Colwich, in 1926, arrangements are proceeding with the Stafford Corporation for a supply of tap water from their reservoir at Milford. At the moment it appears that these arrangements may develop to maturity. This would be the most satisfactory solution of the difficulty, as the Stafford water is in every respect excellent in quality.

STONE R.D.

“ *Eccleshall*.—The inhabitants of this large village still have only a sewage-contaminated water supply.

“ *Acton*.—The water supply is unsatisfactory.”

TAMWORTH R.D.—“ The additional consumption is to some extent responsible for the increasing low pressure in the high parts of the district, and, although a severe inconvenience has not been experienced during the past year owing to the summer season being rainy, arrangements will have to be made for future summer periods.”

TUTBURY R.D.—“ The water supply is for the most part satisfactory throughout the district, though not good in parts of Hanbury in dry weather.”

UTTOXETER R.D.

“ *Rocester*.—During the year the Ministry of Health approved of a scheme for supplying the village of Rocester with water from the Urban District Council's supply. The new mains have been laid and the whole of the work has been completed at a cost of approximately £1,800.

“ The water is purchased in bulk from the Uttoxeter Urban District Council and the supply is limited to 25,000 gallons per day. The supply is constant and should prove of immense benefit to the inhabitants.”

Other Parishes.—“ There are also small public water supply schemes at Abbots Bromley and at Withington, in the Leigh Parish.

“ There appears to be no serious scarcity of water in any of the Parishes within the District.”

Rivers Pollution Prevention.

A Hydrographical Survey of the River Trent was instituted by the Standing Committee on 'Rivers' Pollution of the Ministry of Agriculture and Fisheries in 1923, and has been continued yearly since that date.

In the accompanying Table the percentage of oxygen saturation in the streams at certain fixed points is shown. The extent of the pollution can be judged when it is remembered that a percentage saturation of oxygen below 65 means that the stream is too polluted to support fish life. On reference to the Table it will be noticed that the heavy pollution of the streams that is now taking place in the industrial areas is observed for a considerable distance down stream. Unfortunately, as the streams in the industrial areas are so small, the degree of purification of effluents before discharge into them has to be much greater than if they found their way into a large river and, consequently, the expense is correspondingly greater. In last year's Report a summary of the work undertaken by the various Sanitary Authorities during the year was given. and this year similar details are included in the succeeding paragraphs.

RIVER TRENT.

LOCATION.	PERCENTAGE OF OXYGEN SATURATION.										
	1923.	1924.				1925.		1926		1927	
	July.	May.	June.	July.	Sept.	July.	Sept.	July.	Sept.	July.	Sept.
River Trent at Strongford Bridge	38	28	33	29	47	25	35	41	45	53.5	40.5
River Trent at Darlaston above Stone	48	52	50	29	49	29	30	21	29	41	34.5
River Trent at Aston, below Stone	31	47	50	34	43	37	30	24	29	44.5	43
River Trent at Great Haywood Mill, before receiving River Sow ..	43	52	42	37	47	38	12	21	40	33.5	50
River Trent at Great Haywood Mill, below Weir ... ..	...	65	57	60	61	48	33	40	43	48	60
River Sow at G.N. Railway Bridge	44	80	73	58	71	66	71	40	57	52	68.5
River Sow at Brick Bridge	63	107	93	59	73	102	89	33	75	33	67.5
River Penk at Radford .	49	78	65	60	66	115	86	56	82	26.5	34.5
River Sow at St. Thomas'	44	88	74	53	69	69	56	22	65	40	52.5
River Trent at Weetman's Bridge, near Little Haywood ...	49	68	53	43	50	38	44	27	34	27.5	51
River Trent at High Bridge below Rugeley Sewage Works ...	64	74	69	61	52	53	46	31	48	35.5	51
River Trent at Alrewas, above confluence with River Tame	60	89	71	81	85	99	81	70	76	62	78.5
River Tame at Perry Bar, before entering Birmingham	28	44	48	32	37	13	11	21	39	37	31.5
River Tame at Alrewas, above confluence with River Trent	50	64	70	60	45	44	46	37	46	45	53
River Trent at Alrewas, below junction with River Tame ... ..	...	65	72	74	56	42	39	45	53	56.5	67
River Trent, North Boundary of Burton-on-Trent	58	70	67	73	65	77	57	54	62	46.5	71.5
River Dove above confluence with River Trent	69	106	99	103	84	100	103	83	100	87.5	88.5
River Trent below confluence with River Dove ... ..	...	93	74	82	77	82	72	58	63	62	78.5

RIVER MERSEY WATERSHED.

AUDLEY U.D.—The question of sewerage and sewage disposal for Audley has been the subject of communications between the Public Health Committee and the Local Authority for a considerable period.

A scheme has been prepared ; but from inquiries made it appeared that there was considerable unemployment in the district, and that in consequence the district was not financially in a position to proceed with the scheme, so the matter has been deferred for the present.

BIDDULPH U.D.—Pollution of the Biddulph Brook occurs from the sewage of some cottages near the forge on the Congleton Road, and the Local Authority have been asked to consider a scheme for dealing with this. A Committee has been appointed to visit and to report to the Council.

The Sanitary Inspector in his Annual Report states :—

“ The main system is satisfactory. The time, however, has arrived when, owing to the Council having erected 186 houses under the Housing Acts, it will be found necessary to make provision for adequate treatment consequent upon this addition. Additional lengths of sewers have been laid during the year necessitated by houses and improvements to existing systems.”

RIVER TRENT WATERSHED.

LEEK U.D.—The pollution of the River Churnet by sewage and trade waste has been under consideration by the District Council and the silk manufacturers. Samples have been taken, and further consideration is to be given to a report on the means of sewage disposal prepared by a firm engaged for the purpose of advising as to the best means to be adopted.

CHEADLE R.D.

Cheddleton.—New sewers have been laid and plans prepared for new Disposal Works here.

WOLSTANTON U.D.—The District Council have adopted a scheme for the treatment of the sewage of the population of the major portion of Wolstanton proper—Chesterton, Silverdale, Knutton and Cross Heath—on the biological principle, and a firm of engineers have this in hand. The new works will replace three, where the sewage is treated inadequately on land, and more or less serious pollution of the Lyme Brook will be abated.

On the application of the Council for a loan to carry out the work a public inquiry by one of the inspectors of the Ministry of Health was held. Subsequently the Ministry suggested that a Conference should be held between the Urban District Council, the Borough Council of Newcastle-under-Lyme and the City Council of Stoke-on-Trent with the object of investigating alternatives to the additional plant now proposed. Such a Conference was held under the chairmanship of an inspector of the Ministry, and at that Conference it was decided to take the opinion of an independent expert on the alternative suggested by the Ministry.

In the meantime pollution of the Lyme Brook is occurring.

At the Basford Park Works new distributors have been provided for the filter beds.

NEWCASTLE M.B.—A firm of engineers has been instructed to furnish a report on the sewerage and sewage disposal of the district.

The same remarks apply to this district as in Wolstanton.

CITY OF STOKE-ON-TRENT.—The scheme for a new works, mentioned in my last Annual Report in substitution for the existing two, is in progress at Strongford. In the meantime pollution of the River Trent is occurring.

STAFFORD M.B.—Owing to the satisfactory results obtained by the activated sludge plant that deals with a portion of the sewage, the Council have decided to utilise this method of disposal for the remainder in place of the land treatment which for some time has yielded unsatisfactory results, and constructional work is in progress.

STONE R.D.

Oulton—During the year a small irrigation works was constructed to deal with the drainage from some 60 houses.

TIPTON U.D.—The Surveyor, in an appendix of the Annual Report of the Medical Officer of Health, states :—

“ All the brook courses within the district have been thoroughly cleansed and are now in a very satisfactory condition, with the exception of one. This latter is Addenbrook which passes from the County Borough of Dudley through Tipton, conveying the crude sewage from the Dudley Guest Hospital; mention was made of this in my last Annual Report, but no steps have been taken to remedy this. As the Hospital is very near to our boundary and in an undeveloped part of Dudley, no nuisance is caused to that Authority, but from our point of view it is a serious menace to public health, and some action should be taken to hasten the provision of some method of disposal by Dudley.”

UTTOXETER U.D.—The Sanitary Inspector, in the Annual Report of the Medical Officer of Health, states :—

“ *Rivers and Streams.*—Considerable attention is still being paid to the conditions of the rivers and streams within the Urban Area, and one of the chief sources of pollution, namely, the trade waste from the Wilts. United Dairies is about to be treated on an entirely new Purification Plant which is now nearing completion.

“ A commencement has also been made with a scheme for dealing with the trade waste from Messrs. C. Bunting, Ltd., Brewery.

“ *Drainage and Sewerage.*—Careful inspection and tests are being made whenever an opportunity arises, and where any defective or improper connection has been found it has been remedied, necessitating in some cases a new connection to the soil sewer.”

WOLVERHAMPTON COUNTY BOROUGH.—A Ministry of Health Inquiry was held at Wolverhampton in April. This was to consider applications of the Corporation for the renewal of their certificate under the Wolverhampton Corporation Act, 1891, the certificate being to the effect that they were using the best or only practical means under the circumstances for rendering harmless the effluent from the sewage works and sewage lands flowing into the Pendeford Brook or its tributaries, which form the upper reaches of the River Penk. The application was opposed on behalf of the County Council and the Riparian owners, with the result that the certificate was granted for twelve months only, pending the extensions or remodelling of their works.

The construction of an activated sludge plant for a portion of the daily flow of sewage is completed, but owing to the increase in strength of the sewage the plant has been unable to deal with the volume it was expected it would treat satisfactorily. In the meantime serious pollution of the River Penk is taking place, and this has been the subject of communications between the Authorities and the Ministry of Health.

In his Annual Report for 1927, the Medical Officer of Health for Cannock Rural District states :—

“ The Sanitary Inspector has received numerous complaints during the year about the serious pollution of the River Penk, and he has from time to time reported on the matter to the Council, and also to the Medical Officer of Health of the Staffordshire County Council, who are the authority for rivers pollution.

“ The dairy farmers frequently complain that they are afraid to let their cattle drink from the stream, or that the cattle will not drink from the river at all.

“ As this river constitutes the main supply of drinking water for hundreds of milch cows in their district, it is of vital importance that it should be maintained in such a condition as to enable it to be safely used for ordinary farming purposes, and especially for the watering of cattle.

“ The pollution, which is mainly caused by the discharge into the river of sewage from the Wolverhampton Barnhurst Sewage Farm, is very bad, and has become much worse throughout the year.

“ This pollution is, in my opinion, the cause of the fish in the river dying off in large numbers, and this is viewed with alarm not only by the local inhabitants, but by fishermen generally, as the Penk is a well-known fishing river.

“ The whole matter is under review, and is receiving the serious consideration of the Staffordshire County Council, and of the Wolverhampton Corporation and others, and it is to be hoped that steps will soon be taken to discontinue this serious pollution of the river.

Drainage and Sewerage.

“ At Featherstone and Hilton, a scheme has been completed capable of dealing with the sewage from 400 houses. So far 282 premises have been connected up.

“ *Penkridge*.—The scheme for this village has been under consideration during the year, but owing to the low level of the surrounding land, it cannot be proceeded with until electricity for power purposes is brought to the village.”

RIVER TAME.

OLDBURY U.D. (WORCESTERSHIRE).—Consideration is being given to the laying of a trunk sewer from Oldbury to connect to the Birmingham Tame and Rea Boards' Works for treatment. In the meantime gross pollution of the Tame is taking place, only about half the volume of sewage being treated, the remainder being discharged into the River Tame after preliminary tank treatment only.

COSELEY U.D.—The sewerage of the northern area is in progress.

SEDGLEY U.D.—Conversions and connections have been pushed on with and will shortly be completed.

BILSTON U.D.—The works here are to be extended to deal with the sewage from their own area and the northern section of Coseley.

WEDNESFIELD U.D.—An engineer has been engaged to advise the Council on a scheme for the sewerage of part of the area, and the treatment of the sewage by artificial filtration in substitution for inadequate land treatment.

WEST BROMWICH BOROUGH.—Consideration is being given to the laying of a trunk sewer to convey sewage for treatment to the works of the Birmingham, Tame and Rea Board. In the meantime serious pollution is occurring.

TAMWORTH U.D. & R.D.—The Joint Disposal Works has been the subject of communications between the Public Health Committee and the Tamworth Joint Sewage Disposal Committee, and, while certain work has been done, such work has been inadequate, with the result that unsatisfactory effluents have been discharged into a tributary of the River Tame.

In his Annual Report for 1927, the Medical Officer of Health states :—

“There is a certain improvement in these important works, but a very great deal requires to be done to bring them to a state of efficiency.

“Sewage disposal is essentially an engineering problem. I believe, therefore, that the best results will only be attained when this is recognised and our Surveyor given a free hand to take an active interest in the work.”

LICHFIELD R.D.

Alrewas.—A scheme for the disposal of sewage at Alrewas has been laid before the Council, and is now only requiring the negotiations for the purchase of the necessary land, then it will be ready to despatch to the Ministry of Health with an application for sanction to a loan.

RIVER SEVERN WATERSHED.

SEISDON R.D.

Merry Hill.—The extension of the works here mentioned in my Annual Report last year, namely, the provision of two tanks, three filters, two humus tanks, are completed and are working satisfactorily.

Codsall.—The Council's engineers have nearly completed their plans for a general sewerage scheme for Codsall, and it is the Council's intention to proceed with the scheme as soon as possible.

SEDGLEY U.D.—The Medical Officer of Health, in his Annual Report for the year 1927, states :—

“ The sewerage of Lower Gornal, embracing about 12 miles of sewers, exclusive of sewers laid on the Lower Gornal Housing Estate, was completed in June, 1927. An additional sewer has been laid on the Upper Gornal Housing Estate to prevent flooding of several houses in Nethergate and Green Lane on the lower part of the estate. This has remedied the liability to flooding previously existing during heavy rain storms.

“ The work of providing Sewage Disposal Works for Lower Gornal commenced in October, 1925, was completed in October, 1927.

“ The works were immediately brought into operation by connecting the sewers from the Lower Gornal Housing Estate, containing 236 houses. The drainage from other houses in this area being added daily. The drainage system of the Workhouse and Poor Law Institution buildings, serving a population of about 650 persons, has also been connected with the public sewer. The works for this area are designed to serve a population of 11,000.”

QUARRY BANK U.D.—Direct pollution of the River Stour takes place in this district. A scheme has been prepared and considered by the District Council, who realise that the necessary work must be carried out, though at the present time they do not propose to carry out the scheme until the Upper Stour Valley Main Sewage Board's Scheme, described in the next section, is completed.

UPPER STOUR VALLEY MAIN SEWAGE BOARD.

Owing to sewers being overloaded in Worcestershire and Staffordshire, pollution occurs on the Board's system, the storm water overflow operating during dry weather.

A comprehensive scheme has been prepared by the Engineer of the Board to duplicate the system and provide works for the treatment of approximately 8,000,000 gallons dry weather flow. A Ministry of Health Inquiry has been held and, after some amendment, the Ministry approved of the scheme and sanctioned a loan of £54,000, and the carrying out of the scheme is making good progress.

Housing.

In the accompanying table, which has been prepared from information supplied by the District Medical Officers of Health, the extent to which the building of houses has taken place in each sanitary district will be found. Taking the County as a whole, 4,219 houses were built in 1927, of which 2,613 were erected by Local Authorities under assisted schemes. In the previous year 2,969 were built, of which 2,657 belong to Local Authorities. It is therefore evident that the chief feature disclosed by this table is the increase in the number of houses erected through agencies other than the Local Authorities, and at the same time it will be observed that the latter built practically the same number of houses as in the previous year. A satisfactory feature with regard to the increased number of houses erected in 1927 is that it is becoming much more possible for the necessary and extensive repairs to be undertaken in many existing houses, and for Local Authorities to consider the question of dealing with any unhealthy areas that may exist in their district.

STATEMENT showing the number of :—

(1) Houses erected in Staffordshire during the year 1927, and

(2) Houses in the course of erection at the end of 1927.

SANITARY DISTRICT.	By Local Authority under assisted schemes.		Otherwise.		Totals.	
	Houses erected during year 1927.	Houses in the course of erection at end of 1927.	Houses erected during year 1927.	Houses in the course of erection at end of 1927.	Houses erected during year 1927.	Houses in the course of erection at end of 1927.
URBAN.						
Amblecote ...	...	...	4	...	4	...
Audley ...	...	...	14	...	14	...
Biddulph ...	50	...	8	...	58	...
Bilston ...	297	...	26	...	323	...
Brierley Hill ..	96	...	2	...	98	...
Brownhills ...	54	...	34	...	88	...
Cannock ...	86	...	122	...	208	...
Coseley ...	128	...	36	...	164	...
Darlaston ...	89	86	30	...	119	86
Kidsgrove ...	...	...	23	...	23	...
Leek ...	40	...	47	...	87	...
Lichfield ...	28	...	4	...	32	...
Newcastle ...	102	...	139	...	241	...
Quarry Bank..	75	...	15	...	90	...
Rowley Regis .	90	116	55	...	145	116
Rugeley ...	14	...	29	...	43	...
Sedgley ...	22	...	26	...	48	...
Short Heath ...	...	...	14	...	14	...
Stafford ...	118	...	40	...	158	...
Stone ...	56	...	4	...	60	...
Tamworth ...	40	...	5	8	45	8
Tettenhall ...	82	...	...	...	82	...
Tipton ...	92	...	16	...	108	...
Uttoxeter ...	...	...	17	...	17	...
Wednesbury ..	152	...	...	...	152	...
Wednesfield ..	104	...	54	...	158	...
Willenhall ...	184	...	11	...	195	...
Wolstanton ...	...	...	102	...	102	...
Total ...	1,999	202	877	8	2,876	210
RURAL.						
<i>a</i> Blore Heath ...	...	...	...	...	...	...
<i>b</i> Cannock ...	156	...	201	...	357	...
Cheadle ...	...	...	54	...	54	...
Gnosall ...	...	...	3	...	3	...
Kingswinford .	165	...	...	...	165	...
Leek ...	53	...	15	...	68	...
Lichfield ...	...	...	93	...	93	...
Mayfield ...	...	...	1	...	1	..
Newcastle ...	...	...	11	...	11	...
Seisdon ...	58	...	141	...	199	...
Shifnal ...	4	...	7	...	11	...
Stafford ...	...	...	57	...	57	...
Stone ...	18	...	16	...	34	...
Tamworth ...	30	...	...	...	30	...
Tutbury ...	...	...	23	...	23	...
Uttoxeter ...	...	...	9	...	9	...
Walsall ...	130	...	98	...	228	...
Total ...	614	...	729	...	1,343	...
Combined Totals, Urban & Rural .	2,613	202	1,606	8	4,219	210

a Report not received.*b* Including those built in the Rural Area by neighbouring Local Authorities.

Inspection and Supervision of Food.

(a) MILK SUPPLY.—During the year 1,073 samples of ordinary milk were chemically examined ; 90 of these were not satisfactory. Prosecutions were instituted in 28 cases and were sustained. Five samples of skim milk were analysed and two were unsatisfactory, and in one instance prosecution took place and was sustained. One hundred and two samples of specially-designated milk were chemically analysed and seven samples of Grade “ A ” milk were found to be deficient in fat.

Fifty-eight representations under Section 4 of the Milk and Dairies (Consolidation Act, 1915, were made by Medical Officers of Health outside the County, and as a result of the veterinary inspections 53 animals were slaughtered under the Tuberculosis Order.

Thirty-two cases of tuberculous milk were found in samples taken during the year by the County Council's Inspectors, and the usual action under Section 4 of the Milk and Dairies Act, 1915, followed, 27 cows being slaughtered under the Tuberculosis Order, one died and seven were disposed of by owner for slaughter.

Five representations under Section 4 of the Milk and Dairies Act, 1915, were made to outside Authorities of milk sent in to the County for sale from which samples were taken by the County Council's Inspectors. All these cases were investigated by the Authorities concerned, in four instances with negative results.

In last year's Report it was stated that it had been decided at a Conference of Local Authorities that the County Council should arrange to take samples of milk systematically throughout the Administrative County, for bacteriological investigation especially, and the staff of Inspectors was increased with this object. The scheme was started on the 1st June, and since then quarterly reports have been made to the County Council, so that in the accompanying table the figures do not relate to the calendar year, but the period from the 1st June, 1927, to the 29th February, 1928.

ORDINARY MILK SAMPLES.

1ST JUNE, 1927, TO 29TH FEBRUARY, 1928.

SANITARY AUTHORITY.	No. of Samples Submitted.	Result of Examination.		T.B. Found
		Clean.	Unsatisf'tory	
URBAN.				
Audley	23	21	2	2
Biddulph	16	14	2	...
Bilston	12	8	4	...
Brierley Hill ...	6	3	3	...
Brownhills	20	15	5	1
Cannock	43	24	19	2
Coseley	9	8	1	1
Darlaston	7	2	...	...
Kidsgrove	7	2	5	2
Leek	20	11	9	3
Lichfield	25	7	18	...
Quarry Bank	5	3	2	...
Rowley Regis...	25	12	13	4
Rugeley	11	4	7	...
Sedgley	16	9	7	1
Stafford	40	10	30	4
Stone	23	9	14	4
Tamworth	14	3	11	1
Tettenhall	6	2	4	...
Tipton	17	8	9	3
Uttoxeter	7	...	7	1
Wednesbury	24	11	13	3
Wednesfield	18	12	6	...
Willenhall	11	3	8	...
Wolstanton	28	17	11	1
RURAL.				
Cannock	21	15	6	1
Cheadle	20	17	3	...
Gnosall	4	3	1	...
Kingswinford ...	11	8	3	...
Leek	22	15	7	2
Lichfield	23	9	14	2
Stafford	35	13	22	2
Stone	16	8	8	1
Tamworth	8	4	4	...
Tutbury	6	4	2	2
Uttoxeter	13	12	1	1
Walsall	10	5	5	1
Totals	622	331	291	45

Arrangements have now been made for taking samples of all kinds of milk sold in the various parts of the Administrative County, and on reference to the table the numbers taken will be seen for each area. With regard to the ordinary milk supply, 622 samples were sent for bacteriological examination, and of these 331 were reported as clean, the remaining 291 not being of a reasonable standard of cleanliness. All samples were of fresh milk as sold to the customer, so that no unsatisfactory result can be ascribed merely to the age of the milk. They were obtained from 421 producers and include 45 who reside outside the Administrative County. The number of farms in which the milk was not sufficiently clean was 217, of which 27 were not in Staffordshire.

The figures quoted above relate to the nine months under review ; but it is only fair to state that from the quarterly reports it can be shown that there has been a steady improvement in the cleanliness of the milk, and in the last quarter there were only 11 dirty samples in 97 which had been drawn from 83 Staffordshire producers. In the same period 21, of which six were dirty, came from producers outside the County. Such results are certainly encouraging and confirm the statement which is frequently made that there is no special difficulty in producing clean milk if sufficient attention is given to detail and to what was described by a speaker at the recent Dairy Congress as "dairy discipline."

This improvement in cleanliness shows that in this area active co-operation exists between the Public Health Authorities and the milk producers. In attaining this we have received much assistance from the local branch of the National Farmers' Union, who have been quick to realise that all concerned gain by the production of clean milk. On the other hand, the public do not as yet sufficiently recognise how greatly the health and nutrition of children long past the age of infancy benefit by drinking more milk, so it is hoped that the increased care and attention now given to the production of this valuable food will result in a much greater demand for it.

At the end of the year the Ministry of Health had issued one licence for "Certified" milk and three for Grade "A" (Tuberculin Tested) milk to producers in the County under the Milk (Special Designations) Order, 1923, and the County Council had issued 22 licences for Grade "A" milk. Samples of these designated milks have been taken at monthly intervals and submitted to bacteriological investigation to see if they satisfied the standard of cleanliness laid down in the Regulations. During the nine months, from the 1st June, 1927, to the 29th February, 1928, 168 samples were taken, of which 138 were satisfactory and 30 were not. Tubercle bacilli were found in two samples of milk.

At the beginning of the year only eight producers were licenced to sell Grade "A" milk as against 22 on December 31st. From the point of view of the public there is little doubt that this milk has advantages over the ordinary milk because it is sold in sealed containers under licence, and the standard of cleanliness that has to be maintained ensures its keeping qualities, which are twice as long as the average sample of milk sold under ordinary conditions. It is, therefore, gratifying to find that the market for this graded milk is increasing, as shown by the larger number of licences issued, and it is hoped that the day will not be long distant when the public will demand all milk to be of the standard of cleanliness of Grade "A" milk.

(b) The work under the Food and Drugs Act is summarised in the following Table, in which is shown the number of samples taken and any action necessary :—

	No. of Samples Submitted	No. Genuine	No. Adulterated	Cautions.	Prosecutions.	
					Instituted.	Convict'ns
Aerated Pastry Flour	1	1	...	...	...	...
Arrowroot	3	3	...	...	...	...
Barley	1	1	...	...	...	...
Bi-carbonate of Soda	1	1	...	...	...	...
Brawn	19	14	5	5	...	...
Butter	93	93	...	...	...	...
Cakeoma	4	4	...	...	...	...
Candied Peel	3	3	...	...	...	...
Chocolate	1	1	...	...	...	...
Cocoa	5	5	...	...	...	...
Coffee	9	9	...	...	...	...
Cornflour	2	2	...	...	...	...
Crab (Dressed)	2	2	...	...	...	...
Cream	5	4	1 (a)	...	...	...
Currants	3	3	...	...	...	...
Custard Powder	1	1	...	...	...	...
Egg Substitute	1	1	...	...	...	...
Figs	1	1	...	...	...	...
Flour (Self Raising)	21	21	...	...	...	...
Groats	1	1	...	...	...	...
Ground Ginger	10	10	...	...	...	...
Jam	3	3	...	...	...	...
Lard	57	57	...	...	...	...
Lime Juice	1	1	...	...	...	...
Margarine	3	3	...	...	1 (b)	1
Marmalade	1	1	...	...	...	...
Milk	1,073	983	90 (c)	57	28	28
Milk (Skim)	5	3	2 (d)	...	1	1
Milk (Specially Designated)...	102	95	7 (e)	7	...	...
Oatmeal	2	2	...	...	...	...
Olive Oil	3	3	...	...	...	...
Pea Flour	1	1	...	...	...	...
Pepper	27	27	...	...	...	...
Potted Meats	9	9	...	...	...	...
Potted Pasties	11	11	...	...	...	...
Raisins	3	3	...	...	...	...
Rice	19	19	...	...	...	...
Sausage	24	21	3	3	...	...
Semolina	2	2	...	...	...	...
Shredded Beef Suet	1	1	...	...	...	...
Shredded Whole Wheat	1	1	...	...	...	...
Sponge Cake	10	10	...	...	...	...
Sponge Sandwich	5	5	...	...	...	...
Vinegar	11	11	...	...	...	...
Totals	1,561	1,453	108	72	30	30

(a) Adulterated Sample—Purchase Unofficial. Subsequent Official Sample Genuine.

(b) Prosecution—Margarine Unlabelled.

(c) Five Samples taken from cows. The attention of the producer was called to this, the milk being of very low quality.

(d) Unofficial Sample—led to the Official Sample, followed by the Prosecution.

(e) 7 "Grade A" deficient in fat.

The action taken under the Milk and Cream Regulations, 1912 and 1917, is shown in the following Table :—

1. MILK AND CREAM NOT SOLD AS PRESERVED CREAM.

	(a) Number of samples examined for the presence of a Pre- servative.	(b) Number in which Pre- servatives was re- ported to be present. and Percentage of Preservative found in each sample.
Milk	1141	0
Cream	5	0

2. CREAM SOLD AS PRESERVED CREAM.

(a) Instances in which samples have been submitted for analysis to ascertain if the statements on the label as to preservatives were correct :—

(i.) Correct statements made	0
(ii.) Statements incorrect	0
Total	0

(b) Determinations made of milk fat in cream sold as preserved cream.

(i.) Above 35 per cent.	0
(ii.) Below 35 per cent.	0
Total	0

Prevention of, and Control over, Infectious Disease.

SMALLPOX.—In 1927 four cases of smallpox were notified, one in Bilston, two in Leek Urban Districts and one in Stone Rural District. One case proved fatal. The others were the mild type of disease which is characteristic of the majority of the cases that have occurred in other parts of the country recently. Owing to this mildness it is not easy to control, and so it is satisfactory to find that the active measures taken by the Medical Officers of Health in the districts named have been so effective in preventing an epidemic occurring.

SCARLET FEVER.—1,230 notifications, 862 being in urban districts and 368 in rural districts, were made to District Medical Officers of Health during the year. Six deaths took place in urban districts and nine in rural districts from scarlet fever. The death-rate was 0.01 in urban and 0.04 in rural districts. The disease was not especially marked in any part of the County, but cases occurred in every area except two small parishes, the greatest numbers being in Leek and Rowley Regis Urban Districts and in Cannock Rural District. The disease was of the usual mild type now common and, as has been mentioned, the death-rate was low.

DIPHTHERIA.—During the year 719 cases were notified, 494 in urban districts and 225 in rural districts. There were 38 deaths in urban and 14 in rural districts, giving a death-rate of 0.07 and 0.06 respectively. On reference to the Tables at the end of the Report the numbers and death-rates for each sanitary district will be found. It will be seen that the disease was most prevalent in the following areas :—Biddulph, Brierley Hill, Kids Grove, Leek, Rowley Regis and Tipton Urban Districts, and Cannock and Kingswinford Rural Districts. Although compared with last year there have been fewer cases and a smaller number of deaths, this disease remains one of the most serious in childhood. It is one in which hospital treatment is especially desirable, chiefly because of the danger of complications and the necessity for prolonged convalescent treatment. Unfortunately, owing to lack of isolation hospital accommodation in so many areas in the County, this is not always available ; but, as the matter is now under consideration by the County Council and the districts concerned, it is hoped that before long suitable provision will be made. In the control of this disease the bacteriological examination of swabs from the throat and nose played an important part, and it is, therefore, satisfactory to find that medical practitioners in the County and the school medical staff made full use of the facilities provided at the County Laboratory for this work and during the year 7,206 swabs were sent for examination.

ENTERIC FEVER.—Ten notifications of typhoid fever from urban and ten from rural districts were made to the District Medical Officers of Health during the year. There were two deaths in urban districts and one in a rural district. On reference to the Table at the end of the Report it will be seen that there was no epidemic of this disease, but isolated cases occurred in several sanitary areas.

ENCEPHALITIS LETHARGICA.—26 cases were notified, 15 in urban and 11 in rural districts, and 17 deaths occurred in urban and five in rural districts. Cases occurred in 16 sanitary districts. Fortunately these showed no tendency to spread in epidemic form, but, as in previous years were severe in type, most of the cases ending fatally. The districts where cases occurred will be found in the Table at the end of the Report.

With reference to the non-notifiable infectious diseases, the deaths from measles, whooping cough, diarrhœa and enteritis are as follows :—

MEASLES.—There were 51 deaths in urban districts with a death-rate of 0.10 and six deaths in rural districts with a death-rate of 0.03. Compared with last year there were twice as many deaths in urban districts, but fewer in rural districts. As this disease is not notifiable, we have no information of the number of cases. The death-rate was highest in Cannock and Tipton Urban Districts. This disease is difficult to control because it is highly infectious some days before the characteristic rash appears. Experience seems to indicate that it breaks out in epidemic form in any centre of population about every third year. It is a serious disease in childhood chiefly because of the lung complications that so readily occur and from which most of the fatal cases arise.

WHOOPIING COUGH.—In 1927 there were 121 deaths in urban districts with a death-rate of 0.24 and 47 deaths in rural districts with a death-rate of 0.22. This disease has been much more severe this year and the number of deaths has been double that of 1926. It broke out in epidemic form in the urban districts of Bilston, Tipton and Willenhall, and in the latter district there were 30 deaths; 12 also occurred in Cannock Rural District and 15 in Walsall Rural District. It will be seen on reference to the Tables at the end of the Report that the northern, central and extreme southern parts of the County were comparatively free from the disease. Its importance lies in the fact that it chiefly attacks very young children and is particularly fatal from lung complications.

DIARRHŒA AND ENTERITIS.—There were 76 deaths in urban districts with a death-rate of 7.6 per 1,000 births and 14 deaths in rural districts with a death-rate of 3.6 in children under two years of age. The districts having the highest death-rates were Kidsgrove which was 25.4, and Tamworth 24.1 per 1,000 births. On the other hand, in 11 urban and nine rural districts there were no deaths from this disease which, fortunately, owing to the improvement of sanitary conditions, is now not such an important cause of death in young children as was the case a generation ago.

INFLUENZA.—There were 378 deaths in urban districts and 154 in rural districts. On reference to the Tables at the end of the Report it will be seen that the disease was widespread throughout the County and deaths occurred in all areas except Uttoxeter Urban District. The highest numbers were in Rowley Regis and Wednesbury, where there were 52 and 44 respectively.

The numbers of Cases of Notifiable Infectious Diseases, with the deaths, in the Administrative County during 1927 are as follows :—

Diseases.	Notifications.		Deaths.	
	Urban.	Rural.	Urban.	Rural.
Small-pox	3	1	1	...
Scarlet Fever	862	368	6	9
Diphtheria	494	225	38	14
Enteric Fever	10	10	2	1
Puerperal Fever	15	14	} 18	7
„ Pyrexia	83	40		
Erysipelas	200	54	...	...
Cerebro-Spinal Fever	0	2	...	...
Poliomyelitis	5	8	0	2
Pneumonia	1,272	247	692	173
Encephalitis Lethargica	15	11	17	5
Dysentery	87	47	0	...

1. *Incidence of and mortality from tuberculosis.*

Owing to the action of the Public Health (Tuberculosis) Regulations, 1924, arrangements have been made whereby the Medical Officers of Health have been able to obtain much fuller knowledge of the incidence of tuberculosis in their districts, and from the information they have supplied to me I find there were 5,947 cases of all forms of the disease in the County at the end of the year. This number is made up as follows :—

TOTAL CASES.	PULMONARY.			NON-PULMONARY.		
	M.	F.	Total.	M.	F.	Total.
5947	2294	2105	4399	803	745	1548

This indicates that there is one case of tuberculosis in every 120 persons, or just over 8 per 1,000 of the population, and on reference to the mortality Tables which follow it will be found that approximately one death occurs amongst nine cases in the year.

In 1927, 465 persons died from pulmonary tuberculosis, giving a death-rate of 0.65 per 1,000 of the population, whilst 156 deaths from other forms of tuberculosis yielded a death-rate of 0.22.

The ages at death, divided into sexes, are shown in the following Table :—

Table showing primary cases of Tuberculosis and deaths from the disease classified according to ages and sex.

AGE PERIODS	NEW CASES.				DEATHS.			
	Pulmonary.		Non-Pulmonary.		Pulmonary.		Non-Pulmonary.	
	M.	F.	M.	F.	M.	F.	M.	F.
0.....	1	—	10	6	1	—	7	11
1.....	9	8	46	46	4	3	33	23
5.....	29	37	50	35	} 6	12	15	10
10.....	22	31	25	19				
15.....	53	58	13	11	} 49	75	10	11
20.....	45	67	11	17				
25.....	77	104	12	8	} 92	93	9	11
35.....	66	54	4	2				
45.....	35	21	3	5	} 71	40	5	7
55.....	30	17	2	2				
65 & upwards	11	2	1	1	16	3	3	1
Totals	378	399	177	152	239	226	82	74

On reference to the Table at the end of the Report, the death-rates for each Sanitary District during 1927 will be found.

The following show the number of primary notifications received since 1913 :—

1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927
1722	1399	1233	1048	873	856	699	642	929	971	1029	974	1232	1400	1106

An account of the treatment afforded for tuberculosis will be found in the Annual Report of the Joint Committee of the County Council, Wolverhampton and Dudley County Boroughs.

There has been a slight decrease in the number of deaths from pulmonary tuberculosis this year, but on the other hand a slight increase in those from other forms of tuberculosis. On reference to the tables at the end of the Report it will be found that whilst the death-rate from pulmonary tuberculosis is much higher in urban than in rural districts, the death-rate from other forms of the disease is practically the same in both. The Joint Committee for Tuberculosis have been in communication with those sanitary districts in which the death-rate, particularly from lung disease, has remained much higher than the rest of the County for a long period of years, and it is hoped that in these areas special investigations will be made to see if an improvement can be effected in environmental conditions, for it is well known what an important part domestic insanitation in all its forms plays in the development of this disease. As the Joint Committee are taking active steps in affording treatment, and the County Council through its Health Visiting Scheme is materially assisting the campaign against consumption in the teaching of personal hygiene, it is obvious how necessary it is that sanitary authorities should be equally active in improving the environmental conditions of their districts, for otherwise much of the work undertaken by the other authorities mentioned is liable to be undone.

2. *Notification.*

On looking at the Table it will be seen that there has been a reduction in the primary notifications of tuberculosis this year as compared with last ; but last year was rather exceptional, for great efforts were made to ensure better notification in all districts, and I think that the number of notifications for this year is about normal, for on reference to the records for each district, it has been found that with the exception of two small rural districts there have been many more notifications than deaths from the disease. One of the chief difficulties that the Joint Committee are faced with is that in too many instances patients do not come for medical advice early enough, and therefore treatment cannot be as effective as it would be if the disease was dealt with in its earliest stages. This is due to the fact that pulmonary tuberculosis usually has a very insidious onset, and the patient does not realise the seriousness of his condition at the stage when the disease is essentially curable. If patients would only go for examination as soon as they recognise that something is wrong, instead of putting off the matter, much more could be done for them, and, as the Joint Committee now have dispensaries where skilled advice can be obtained in every area of the County, it is hoped that the public will make even greater use of these institutions than they do at present.

County Bacteriological Laboratory.

As will be seen in the Table the work of the County Laboratory continues to increase. As in former years, the results of the examination of specimens have been classified under the various diseases for which the investigation was required, and the mere numbers indicate to what extent the medical practitioners rely upon the work of the Laboratory in the conduct of their work. Whilst the numbers shown must of necessity vary with the incidence of infectious disease in the County, this must not be taken to mean an increase in that respect, but rather to the fact that with modern technique practitioners find that they can place greater reliance upon the work of the Laboratory in assisting them in the diagnosis and treatment of disease.

		Diphtheria.	Tubercle.	Enteric Fever.	Cerebro-Spinal Fluid and Swabs	Ring-worm.	Malaria.	Dysentery.	Other Examinations
Commencement of Scheme, Oct. 20, 1898, to June 30, 1899		212	...	...	...	...	...	...	...
From July 1, 1899, to June 30, 1900...		378	...	...	...	...	...	...	...
From Jan., 1900, to June 30, 1900...		...	23	9	...	...	...	...	...
From July 1, 1900 to June 30, 1901		730	100	74	...	...	...	...	...
a	" " 1901 " " 1902	571	92	61	...	...	...	...	...
	" " 1902 " " 1903	668	122	49	...	...	...	...	...
	" " 1903 " " 1904	507	148	41	...	...	...	...	...
	" " 1904 " " 1905	747	136	32	...	...	...	...	...
	" " 1905 " " 1906	755	159	51	...	...	...	...	...
	" " 1906 " " 1907	1485	202	63	7	...	...	...	...
	" " 1907 " " 1908	1603	150	39	...	...	...	...	...
	" " 1908 " " 1909	970	203	150	...	...	...	...	...
	" " 1909 " " 1910	1255	249	69	...	...	...	...	...
	" " 1910 " " 1911	1961	252	85	...	...	...	...	...
b	" " 1911 " " 1912	1346	266	217 ^d	...	...	...	...	...
	" " 1912 " " 1913	724	533	45	...	...	...	...	...
c	" " 1913 " " 1914	1698	638	55	12	...	...	...	...
	" " 1914 " " 1915	1689	520	73	...	...	...	...	...
	" " 1915 " " 1916	1071	430	42	32	...	...	...	...
	" " 1916 " " 1917	1162	541	43	31	...	...	...	...
	" " 1917 " " 1918	1426	763	31	48	...	...	...	...
	" " 1918 " " 1919	797	825	27	46	...	...	...	1
	" " 1919 " " 1920	2656	1106	361 ^e	12	...	...	...	8
	" " 1920 " Dec. 31, 1920	1539	388	27	2	...	...	...	2
f	" Jan. 1st " " 1921	2509	631	112	6	...	2	...	76
	" " " " 1922	1643	681	23	4	30	6	4	21
	" " " " 1923	2080	885	198	27	218	11	...	19
	" " " " 1924	7281	1006	74	11	262	10	1	97
	" " " " 1925	5875	1488	45	14	501	31	4	340
	" " " " 1926	5462	1673	295	18	604	13	6	621
g	" " " " 1927	7206	1516	292	18	499	12	108	2057
Totals from commencement of Scheme to Dec. 31st, 1927 ...		58006	15726	2683	288	2114	85	123	3242

a From this year onwards, excluding Smethwick, now a County Borough.

b Excluding five Pottery Towns which with Hanley, now constitutes the County Borough of Stoke-on-Trent.

c Handsworth added to Birmingham C. B., November 9, 1911.

d Including 109 Special Blood Examinations from Cheddleton Mental Hospital.

e Including 336 blood against B. typh, and A. and B. para-typh. from Cheddleton Mental Hospital.

f Portion of Administrative County transferred to Stoke-on-Trent County Borough as from 1st April, 1922.

g Portion of Administrative County transferred to Wolverhampton County Borough as from 1st April, 1927.

Under the heading “ Other Examinations ” are included 1,554 examinations of milk, 67 of water, three examinations of pork pies, 11 meats for tuberculosis, four meats for actinomycosis, one specimen of pus for actinomycosis, and 25 library books for organisms of infectious disease.

In connection with food poisoning cases there were 98 agglutination tests, 10 examinations of faeces, two blood cultures and 17 absorption tests. Most of these examinations were concerned with the diagnosis of a bacillus *Aertrycke* epidemic, and the causative organism was isolated and the diagnosis established. Owing to recent progress in this branch of bacteriology, it is no longer sufficient simply to diagnose the causative organism, but the bacillus must in addition be separated into various groups or strains, necessitating the adoption of highly-technical serological procedures.

The remainder of the “ Other Examinations ” involved the isolation of various micro-organisms from human or animal sources.

Venereal Diseases.

As full details were given of the County Council's scheme for treatment in the Survey Report of 1925, it will only be necessary to state this year that the work has continued as on former lines, and that there has been no increase in the number of clinics during the year.

The following table shows the number of examinations of specimens made at the County Laboratory during each quarter of the year :—

EXAMINATIONS OF PATHOLOGICAL SPECIMENS MADE AT THE
COUNTY LABORATORY UNDER THE VENEREAL DISEASES
SCHEME DURING THE YEAR 1927.

	For Detection of		For Wasserman Reaction.	Other Examina- tions.	Total.
	Spirochetes	Gonococci			
1st Quarter .	1	118	290	18	427
2nd Quarter	1	141	352	19	513
3rd Quarter	...	142	377	41	560
4th Quarter	..	102	316	19	437
TOTAL ..	2	503	1335	97	1937

In addition to above 580 sigma tests were made during the year and 5 bottles of vaccines for outside authorities.

Whilst under “ Other Examinations ” are included 15 Cerebrospinal Fluids for Cell count, Globulin, and Colloidal Gold Test, and 61 Complement fixation tests for Gonorrhœa, the examination of 11 Prostatic fluids, seven urines, and the making of three cultures.

In the following table the numbers treated during the year are set forth, which include cases from the County who attend clinics outside the area :—

STAFFORDSHIRE CASES TREATED FOR VENEREAL DISEASES
DURING THE YEAR 1927.

Clinic	Syphilis	Soft Chancre	Gonorrhœa	Non-Venereal	Total	Attendances
Birmingham General Hospital	12	—	24	16	52	2593
Bristol (Royal Infirmary)... ..	—	—	—	—	—	14
Derby	1	—	1	2	4	99
Dreadnought Hospital Green- wich	—	—	1	—	1	6
Dudley Guest Hospital ..	25	—	52	30	107	4811
Kidderminster	—	—	1	—	1	62
Lichfield	13	—	16	4	33	1077
Stoke-on-Trent	59	—	65	25	149	2581
Stourbridge (Corbett Hospital)	13	—	23	12	48	2846
Walsall	13	—	17	14	44	1240
Wolverhampton General Hospital	109	—	104	106	319	6616
TOTALS	245	—	304	209	758	21945

At the end of 1927 there were 28 medical practitioners authorised to receive free supplies of salvarsan or its substitutes for the cases of syphilis in their practice ; 8 doctors on the list availed themselves of this provision during the year.

When comparing the total number of cases treated at the clinics with previous years, it was found to be practically stationary. This year 758 cases were dealt with as compared with 769 ; 209 of these fortunately proved, however, not to be suffering from venereal disease. On the other hand, each year some increase has been observed in the number

of attendances. This year the figure was 21,945 as against 20,124 last year. This is in every way satisfactory, for it shows that the patients have confidence in the treatment afforded, and are willing to continue attending the clinics and not disappear when their symptoms abate as was the case when the scheme started. Unfortunately, in this disease protracted treatment is required, and there is a long interval during which from the patient's point of view he is apparently cured, but when, in fact, he remains in an infectious state and is, therefore, able to transmit the disease to others.

It will be seen that in the Table several clinics are mentioned which are outside the area of the Administrative County. They are included in the Table because patients domiciled within the Administrative County went there for treatment.

Maternity and Child Welfare.

1.—THE PROVISION AND INSPECTION OF MIDWIVES.—

The work undertaken under the Midwives' Acts, 1902, 1918 and 1926, relates to the whole of the Administrative County with an estimated population at the middle of the year of 711,300, whilst the Health Visiting work is limited to the special Health Visiting Area of the County, which now has a population of 307,158, a decrease of 14,039, owing to the transfer of Heath Town Urban and part of another district to Wolverhampton County Borough.

274 midwives notified their intention to practise during the year. Of these 252 are trained and 22 are bona-fide midwives. The bona-fide midwives have decreased by 13 since last year, and the trained midwives have increased by two, the total number of midwives being eleven less than last year. In addition to these, 95 midwives residing in County Boroughs and adjoining Counties have also notified their intention to practise within the Administrative County.

The ages of midwives who were practising in the Administrative County in the ten years 1918—1927 are indicated in groups in the following table:—

YEAR.	21 to 45			45 to 65			65 and upwards			Totals.		
	North	Central	South	North	Central	South	North	Central	South	North	Central	South
1918 ...	38	...	58	72	...	52	35	...	38	145	...	148
1919 ...	30	31	40	46	43	24	26	27	21	102	101	85
1920 ...	50	50	61	36	20	22	19	24	15	105	94	98
1921 ...	58	52	60	28	22	23	21	21	16	107	95	99
1922 ...	51	64	68	21	21	21	14	16	14	86	101	103
1923 ...	55	59	66	21	27	18	14	16	11	90	102	95
1924 ...	50	56	62	22	26	19	14	11	12	86	93	93
1925 ...	54	64	63	27	24	23	13	8	10	94	96	96
1926 ...	50	63	74	26	26	15	13	9	9	89	98	98
1927 ...	55	57	72	26	30	15	6	5	8	87	92	95

As regards the number of cases attended by midwives during 1927 in the three areas respectively, the figures are as follows:—

	No. of Midwives.	Births attended	Total Births.	Percentage attended by Midwives.	Mean number of cases attended per Midwife.
North ...	87	2165	3111	69.6	24.8
Central ...	92	2762	3956	69.8	30.0
South ...	95	5355	6789	78.8	56.3

The total number of cases attended by midwives only in the Administrative County during 1927 was 10,282, the total number of births registered being 13,856. It thus appears that midwives attended 74.2 per cent. of the total births in the County, the percentage for the previous year being 83.9.

In compliance with the rules of the Central Midwives' Board, 2,897 notifications have been received from certified midwives.

The following figures show the number of notifications under four headings received during the past seven years, together with the number of births attended by midwives :—

	1921	1922	1923	1924	1925	1926	1927
Number of Births attended by Midwives	12800	13033	11637	11382	11780	12201	10282
Sending for medical help	1948	1992	1894	2083	2219	2523	2564
Still Births	244	245	230	211	190	208	212
Death of Mother ..	4	1	5	4	11	20	6
Death of Child ..	39	29	20	61	60	70	115

The following figures show the causes which occasioned the sending for medical help :—

Causes of sending for Medical aid.	Northern District.	Central District.	Southern District.	Total.
PREGNANCY :				
Abortion	23	35	26	84
Threatened abortion	8	11	5	24
Puffiness of face and hands ...	4	2	8	14
Premature birth	10	11	—	21
Fainting	2	1	3	6
Varicose veins	6	6	7	19
Fits	1	1	3	5
Vaginal discharge	5	4	6	15
Unsatisfactory condition ...	3	9	15	27
Excessive sickness	3	4	6	13
Loss of blood	1	9	8	18
History of previous still-births and abortions	2	—	17	19
Odema of legs	3	1	7	11
Albuminuria	15	4	22	41
Sore of genitals	1	1	1	3
Contracted pelvis	—	—	9	9
	87	99	143	329
LABOUR :				
Abnormal presentation ...	35	29	91	155
Delayed or difficult	87	187	292	566
Placenta prævia	4	6	5	15
Hæmorrhage ante	9	20	34	63
Ditto post	16	17	29	62
Eclampsia	2	2	6	10
Prolapse of cord	5	7	2	14
Lacerated perinæum	83	124	252	459
Retained placenta and membranes	19	22	44	85
Unsatisfactory condition ...	14	8	6	28
Inertia	15	28	5	48
Contracted pelvis	4	4	3	11
Purulent discharge	—	2	—	2
Cough	2	4	1	7
Albuminuria	3	2	—	5
	298	462	770	1530

Causes of sending for medical aid.	Northern District.	Central District.	Southern District.	Total.
LYING-IN :				
High temperature	28	20	45	93
Inflamed and painful leg ...	2	7	8	17
Convulsions	2	1	2	5
Unsatisfactory condition ...	7	13	12	32
Offensive lochia	1	—	—	1
Unusual swelling of breasts ..	2	2	2	6
Abdominal swelling and tenderness	—	1	—	1
	42	44	69	155
CHILD :				
Deformities	16	11	18	45
Convulsions	7	3	10	20
Inflamed & discharging eyes	30	35	101	166
Feebleness and prematurity ..	38	44	137	219
Unsatisfactory condition ...	12	17	8	37
Rash	2	3	7	12
Pemphigus	4	—	3	7
Spina Bifida	3	1	5	9
Hare lip and cleft palate ...	1	1	11	13
Club foot	1	4	5	10
Serious skin eruption	1	—	10	11
Injuries during birth	—	1	—	1
	115	120	315	550
Grand Total	542	725	1297	2564

In the following Table, in which the County is divided into three districts, the numbers of Midwife, practising, with the notifications received from them, together with the visits, interviews and inquiries of the Inspectors of Midwives, are shown :—

VISITS OF INSPECTORS, NOTIFICATIONS, INQUIRIES, &C., DURING THE YEAR 1927.

District.	Mean no. of Midwives, 1927			Visits.	Interviews.	Notifications.										Inquiries.							
	No. on List.	Trained.	Un-trained.			Medical Assistance.	Inflamma- tion of Eyes	Still Births.	Deaths		Puerperal Fever.	Laying out the dead.	Contact with infection.	Artificial Feeding.	Medical Assistance.	Inflamma- tion of Eyes	Still Births.	Deaths		Puerperal Fever.	Laying out the dead.	Contact with infection.	Artificial Feeding.
									Mother.	Child.								Mother.	Child.				
North ..	87	77	10	397	329	542	30	58	3	29	4	12	18	25	49	42	15	1	5	4	4	18	..
Central ..	92	87	5	386	354	725	35	63	4	37	10	7	49	35	26	48	24	..	2	8	..	44	..
South ..	95	88	7	496	485	1297	101	91	..	49	3	8	23	22	286	155	52	..	11	3	4	23	..
Totals ..	274	252	22	1279	1168	2564	166	212	7	115	17	27	90	82	361	245	91	1	18	15	8	85	..

In addition to the routine inquiries conducted by the Midwives' Inspectors, six irregularities were specially investigated. Of these one was reported to the Local Supervising Authority, who reprimanded the midwife; one was cautioned by the County Medical Officer; one was verbally cautioned by the Midwives' Inspector at the time of her inquiry; in two instances the particulars were reported to neighbouring Local Supervising Authorities concerned; whilst the remaining case did not necessitate any further action being taken.

Since the Act came into operation, the names of 111 midwives have been removed from the Roll as a result of action taken by the Local Supervising Authority. The number of irregularities brought to notice is getting gradually less and less each year as the old bona-fide type of midwife is being replaced by the trained one.

During the year the deaths of three midwives have been reported to the Local Supervising Authority.

In the following table particulars as regards equipment, &c., of certificated midwives are set forth:—

PARTICULARS AS TO EQUIPMENT AND EFFICIENCY OF MIDWIVES VISITED.

District.	Requirements			No. reasonably clean as to		No. who can—			General Efficiency
	Bags Equipped		Case Books and Forms			Read Ther- mometer	Read and write	Pass Catheter	
	Fully	Partially		Person	Home				
North ..	82	5	86	85	84	83	84	79	80
Central	87	3	92	92	92	92	90	88	89
South ..	88	7	95	95	95	95	92	88	88
Totals ..	257	15	273	272	271	270	266	255	257

In the 1925 Report details were given of the scheme of the Committee for providing an efficient midwifery service within the Administrative County, and as there has been no alteration it will be unnecessary to repeat my former remarks.

During the year eight district nursing associations were subsidised to the extent of £245 10s. 0d, and at the end of 1927 there were seven midwives receiving subsidies, an increase of one since the previous year. At the end of the year there were 62 local nursing associations affiliated to the County Nursing Association which undertake midwifery, and 8 non-affiliated local nursing associations undertaking the same service. No new associations were formed during the year.

The post-certificate course of training at the Tipton Training Home for practising midwives, which started in November, 1925, has been continued. Five midwives in private practice and six midwives from the local nursing associations have attended the course, which is of a fortnight's duration, and under the scheme, each practising midwife will be given an opportunity of attending the course every four years.

Under the Rules of the Central Midwives' Board, a midwife has to send for medical help if any abnormality occurs, and in the Midwives' Act, 1918, provision is made for the payment of the doctor called in in this way, the fees allowed being according to a scale issued by the Ministry of Health.

During the financial year ending March 1928, 2,556 notifications of sending for medical help were received, and out of this number medical practitioners claimed their fees from the County Council in 1136 cases, that is, 44% of the possible claims.

The fees paid by the County Council are as follows:—

FEES PAID TO MEDICAL PRACTITIONERS UNDER
MIDWIVES ACT, 1918.

Financial Year.	No. of Notifications of sending for Medical Aid.	No. of Claims received.	Percentage of Claims received to Notifications.	Total amount paid to Doctors during year.	Amounts recovered from Patients during year.
			%	£ s. d.	£ s. d.
1925—26	2228	780	35	1100 15 0	366 9 9
1926—27	2641	1147	43	1702 19 3	408 4 6
1927—28	2556	1136	44	1598 5 9	503 1 0

The cost of collection is £150 per year. It will be observed that each year there has been an increase in the percentage of claims of fees from doctors in proportion to the number of requests for medical assistance. On the other hand, during each year, there has been an increase in the amount recovered from patients.

No alteration has taken place in the income scale, which was drawn up for the guidance of the Collector when making application for the recovery of the fees, which is as follows :—

- (i.) Where the net weekly income of the family after deducting 3s. 6d. for each child under 14 years of age does not exceed 30s., the County Council shall not claim repayment of the medical practitioner's fee.
- (ii.) Where the net weekly income of the family, calculated as above, is over 30s. but does not exceed 45s., the County Council shall claim repayment of one-half of such fee.
- (iii.) Where the net weekly income of the family, calculated as above, exceeds 45s., the repayment of the whole of such fee shall be claimed.

Owing to the varying charges made for mileage by the medical practitioners, an arrangement has been made with the Local Branch of the British Medical Association for a uniform mileage fee of 1s. 6d. per mile one way only after two miles from the doctor's residence.

2 —WORK UNDER THE HEALTH VISITING SCHEME —

As already mentioned, the County Health Visiting Area serves a population of 307,158, which includes 14 urban districts, 14 rural districts, two parishes comprising part of a rural district in Shropshire, and the parish of Dudley Castle Hill.

In April of this year the Heath Town Urban and part of the Seisdon Rural District were transferred to the County Borough of Wolverhampton.

There has been no alteration in the scheme during the year which was fully described in the Survey Report.

(i) Combined Clinics.

At the end of December, 1927, there were 26 combined school clinics and infant welfare centres and four infant welfare centres in the Seisdon Rural District. In 11 of the larger centres the Committee have provided the necessary equipment for ante-natal work, these are at Audley, Biddulph, Brockmoor, Brownhills, Cheadle, Harriseahead, Pelsall, Sedgley, Tamworth, Uttoxeter and Willenhall. In these areas the midwives were specially invited to bring expectant mothers to the centre, and in order to ensure their co-operation it was made clear to them that these clinics were not for treatment and that the cases would not be taken over from them. In the event of any special treatment being found necessary, the Medical Officer of the Centre notifies the midwife so that she can see that the patient obtains suitable treatment. This arrangement appears to work satisfactorily, and I have no doubt that as a result of the post-certificate course of training to midwives, particularly in ante-natal work, they will take full advantage of the facilities now offered at these centres. This part of the Maternity and Child Welfare Scheme must necessarily be slow in development, but I think that the arrangement now made with the midwives will have the desired effect in due course.

At the end of the year the Lichfield Rural District Council gave notice that they were going to close their infant welfare centre at Rugeley, which up till then had served the Rugeley Urban District in the County Health Visiting Area. Accordingly, arrangements were made by the County Council to establish a combined school clinic and infant welfare centre at Rugeley.

The three voluntary centres at Mayfield, Rocester, and Tutbury, all in the County Health Visiting Area, have been continued, but the County Council are not concerned in any way with their management.

In the Table at the end of the Report will be found details of the work of the centres. In 1927 :—

511 attendances were made by expectant mothers, compared with 661 in the previous year.

19,642 children under one year, as against 20,438 in 1926; and 18,953 as against 17,818 children between one and five years attended the centres

Although the corresponding attendance figures for last year have been given, they are not strictly comparable owing to the loss of two centres in the Heath Town Urban District which in April became part of Wolverhampton. If this is borne in mind, and also the fact that the actual number of births was 458 less, it will be seen that no ground has been lost, whilst on the other hand there has been an increase in the number of children between one and five who have attended the centres.

The names and addresses of the centres are as follows :—

Aldridge	...	...	Church Room.
Audley	...	...	Primitive Methodist Schools.
Biddulph	...	...	Church Hall.
Brockmoor	...	...	St. John's School.
Brownhills	...	...	Mount Zion Primitive Methodist Schools.
Cheadle	...	...	Charles Street Wesleyan School.
Codsall	...	...	Trinity Free Chapel School, Codsall.
Hamstead	...	...	Church Institute.
Harriseahead	...	...	Wesleyan Sunday School.
Kidsgrove	...	...	Town Hall.
Kingswinford	...	...	Wesleyan Methodist School, Moss Grove.
Kinver	...	...	The Old Conservative Club, Dark Lane, Kinver.
Lichfield	...	...	Mill House, City Station Road.
Lower Gornal	...	...	Memorial Hall.
Norton Canes	...	...	Craddock Memorial Schools.
Pelsall	...	...	Wesleyan Central Hall.
Penn	...	...	St. Philip's Church Rooms, Penn Fields.
Pensnett	...	...	St. James' United Methodist School.
Quarry Bank	...	...	Primitive Methodist School, New Road.
Rugeley	...	...	Congregational Sunday School, Heron Court, Rugeley-
Sedgley	...	...	Bleak House.
Short Heath	...	...	Church Institute.
Talke	...	...	New Road Wesleyan School.
Tamworth	...	...	Wesleyan Schools, Victoria Road.
Uttoxeter	...	...	Congregational Sunday School, Carter Street.
Walsall Wood	...	...	Primitive Methodist School, Lichfield Road.
Wednesfield	...	...	Church Institute.
Willenhall	...	...	Nurses' Home, Walsall Road.
Wombourn	...	...	Wombourn Institute.
Wordsley	...	...	Primitive Methodist School.

At these centres the work is chiefly educational, and ordinary cases requiring treatment are referred to their family doctor. Crippling conditions, however, do not come under this category, and during the year 65 cases were sent to orthopædic hospitals for out-patient treatment in the first instance, 13 being treated as in-patients. The classification of the conditions dealt with is as follows :—

Genu valgum	...	...	...	1
Rickets	...	...	...	13
Knock Knees	...	...	...	5
Infantile Paralysis	...	...	...	5
Congenital Abnormality	...	...	...	1
Flat Feet	...	...	...	4
Talipes equino varus	...	...	...	6
Bow Legs	...	...	...	15
Club Foot	...	...	...	4
Congenital torticollis	...	...	...	1
Mid dorsal kyphosis	...	...	...	1
Poliomyelitis	...	...	...	7
Partial Dislocation of Tarsus	...	...	...	1
Wasting of Left Arm	...	...	...	1

The importance of treating these conditions as early as possible is well known, and until arrangements were made to this end most children so suffering had to wait until they entered school before treatment was afforded, when it naturally had to be more prolonged and more costly, besides not being so efficacious.

Children suffering from squint who are under school age are now treated by the Ophthalmic Surgeon of the Education Committee, so that the condition is dealt with as soon as it arises, and in this way the danger of the loss of sight in the squinting eye by disuse is obviated. During the year 11 cases were treated in the Health Visiting Area.

(ii.) *Health Visitors.*

There are now 35 whole-time health visitors on the staff, who serve an estimated population of 225,482. These health visitors serve the more thickly populated portions of the area except in the rural districts of Cheadle, Leek Kingswinford, Tutbury and Walsall. In the remainder of the districts the work is undertaken by 43 part-time health visitors, serving a population of 81,676. These are district nurses employed by district nursing associations.

The arrangement for the instruction of the health visitors has been continued this year. On appointment, each is attached to the health visitors for the Sedgley area for one month, and during the winter months, lectures are given at Stafford on various subjects connected with the health visitor's work.

The visits paid by the health visitors during the year are as follows :—

To expectant Mothers ...	(1) First visits, 1,994.
	(2) Total Visits, 5,083
To infants under 1 year ..	(1) First visits, 5,270.
	(2) Total visits, 44,079.
To children 1 to 5 years	Total visits, 78,028.

No maternity homes have been established by the County Council as yet, but they have arrangements with the Mrs. Legge Memorial Home, Wolverhampton, for dealing with prospective unmarried mothers, who are received at the home for their confinement and remain there for six months. The County Council contribute 40/- per patient for six weeks, the cost for the remainder of the period being defrayed from philanthropic sources. By this means, 10 cases were dealt with in 1927.

In addition, arrangements have been made for midwifery cases to be sent from the Health Visiting Area to the following Maternity Homes :—Ashbourne, Newport, Bath Road Maternity Home, Wolverhampton, and Tipton Maternity Home.

Under Part II. of the Midwives and Maternity Homes Act, 1926, the County Council, as the Local Supervising Authority, have been responsible for the registration of all maternity homes from the 1st January, 1927, throughout the administrative County. Eighteen applications for registration were received during the year, one was withdrawn, and 17 homes have been registered. In the case of one home, the Local Supervising Authority, having refused to register it, a successful appeal was made at the local police court. One application was made for exemption from registration, which was allowed. These maternity homes, in the majority of cases, are only small ones which have been registered for one or two beds only, and are at the residence of a midwife.

During the year £18 11s. 0d. was allowed by the County Council, under Section 2 (1) of the Midwives and Maternity Homes Act, to midwives as compensation for loss of practice on suspension after being in contact with a septic case, the midwife not being in default.

Infantile Mortality.

The infant mortality in the Administrative County for 1927 was 80 per 1,000 births as against 72 last year, the figures for the urban districts being 84, and for the rural districts 69, whilst for England and Wales during this period the infant mortality rate was 71.

The midwives during the year have reported 115 deaths of infants during the first 10 days of life, the causes of death being grouped as follows :—

Asphixiated	...	...	...	...	9
Congenital Heart	...	...	...	...	9
Convulsions	...	...	...	...	14
Deformities	...	...	...	...	11
Feebleness and Prematurity	...	...	...	...	63
Injury at Birth	...	...	...	...	4
Marasmus	...	...	...	...	1
Melina Neonatorum	...	...	...	...	1
Overlaying	...	...	...	...	2
Pneumonia	...	...	...	...	1

These deaths occurred in the practice of midwives in cases where no doctor was in attendance, and the number has no relation to the infantile death-rate which is calculated on the total number of deaths under one year per 1,000 births, the total number of such deaths in the Administrative County being 1,112.

On examining the detailed causes of death it was found that the increased infant death-rate this year was due chiefly to more deaths from whooping cough and influenza. Those from congenital debility and premature birth remained practically stationary and resulted in 453 deaths. With regard to these it was mentioned in last year's Report that an International inquiry had started (and this is still proceeding) on the causation of such deaths as well as those of still-births, for whilst various public health measures have effected a very great reduction in the infantile deaths from other causes, these remain practically constant.

Maternal Mortality.

It will be seen from the following Table that the maternal mortality is 3.7, the same as last year, and indeed there has been very little alteration in this death-rate for many years. On looking at such a Table as this the bare facts shown are liable not to be sufficiently appreciated, and I think that many will be surprised to learn, as they will from this Table, that in the Administrative County on an average one woman loses her life every week from child-birth, whilst there is no record of the number disabled, often permanently, by motherhood.

There is little doubt that many deaths could be prevented by adequate ante-natal care, skilled assistance in suitable surroundings at the confinement, and suitable post-natal treatment when necessary. To attain such an ideal is not easy and, without the assistance of public authorities, almost impossible. For some years the County Council have been actively engaged in arranging for the provision of suitably trained midwives throughout their area, and two years ago they adopted a scheme for post certificate instruction for practising midwives at which special attention is paid to ante-natal work. At the larger infant welfare centres ante-natal clinics have been started, and in due time it is hoped to extend this work to all the other centres.

Since 1918 arrangements have been made for the payment of medical fees in necessitous cases when a doctor has been called in by a midwife under the rules of the Central Midwives' Board, so that now there is no reason why a woman shall not receive medical treatment when required during pregnancy or at her confinement.

During the year arrangements have been made with maternity homes, which have not been established by the County Council, but are conveniently near to the various parts of the Health Visiting Area, where complicated cases of midwifery can be sent, or where women can go before their confinements who require special treatment. The registration of maternity homes belonging to practising midwives under the Maternity Homes Act is another step that has been taken to adequately supervise the practice of midwifery. In another section of the Report details will be given of the scheme adopted for the treatment of cases of puerperal prexia.

The Ministry of Health have recently set up a Committee to inquire into maternal deaths with the view to seeing what further assistance is required, and it is hoped that further light will be thrown upon the causation of puerperal fever, for, although there is considerable knowledge of its causation, there are still cases in which this remains obscure. It must be admitted, however, that without the active co-operation of the women themselves, much of our efforts will be of little avail. The importance of making adequate preparation for a confinement is well recognised, but comparatively few realise the necessity of ante-natal care, especially during the latter months of pregnancy, and, when investigating a maternal death, it is only too frequently found that the woman did not seek advice early enough.

Year.	Births.	Deaths from		Maternal Mortality per 1,000 births.
		Puerperal Fever.	Other Diseases and Accidents of Parturition.	
1918	15,339	16	27	2.8
1919	15,101	27	40	4.4
1920	20,116	26	63	4.4
1921	18,848	24	44	3.6
1922	16,394	21	42	3.8
1923	15,342	20	40	3.9
1924	15,546	15	28	2.7
1925	15,241	15	32	3.1
1926	14,535	19	45	4.4
1927	13,856	25	27	3.7
Mean for 10 years	16,031	20	38	3.6

With regard to the deaths of mothers from other accidents and diseases of parturition, seven were reported by midwives as having occurred in their practice out of a total of 27. It is now the duty of a midwife to notify the death in her practice even if she attends as a maternity nurse,

but if the case has been removed to hospital and died there we should not have been informed by the midwife, so that our record of the causes of death under this heading is incomplete.

Under the recent scheme of the Ministry of Health we shall have to make arrangements with the Registrars of Deaths to notify us immediately on the occurrence of each death, and then a special inquiry will be made for the information of the Ministry of Health.

The causes of the seven deaths reported by midwives are as follows :—

Heart Disease	...	...	...	1
Post-Partum Hæmorrhage	...	...	...	2
Pulmonary Embolism	...	...	...	1
Tuberculosis	...	...	...	2
Placenta Praevia	...	...	...	1

It will be observed that three of these were due to general disease and were not caused by conditions connected directly with the confinement.

PUERPERAL FEVER AND PUERPERAL PYREXIA REGULATIONS.

The new Regulations dealing with these conditions came into operation on the 1st October, 1926. Puerperal Pyrexia is now defined as meaning any febrile condition occurring in a woman within 21 days after childbirth or miscarriage in which a temperature of 100.4° or more has been sustained during a period of 24 hours or has recurred during that period.

The cases coming within this classification have to be notified to the Medical Officer of Health immediately, and as a result there has been a decrease in the number of notifications of puerperal fever, for in the latter there is always a rise of temperature as defined in the previous paragraph for puerperal pyrexia. On the other hand, many of the conditions which cause a rise of temperature during the puerperal state can be ascribed to general diseases and not to those especially connected with the confinement, but as it was not possible to clearly define puerperal fever, there

is little doubt that formerly many cases of this condition were overlooked, and it was decided to have all febrile conditions, whatever the cause during the puerperal state, notified, so that each case could be investigated and adequate treatment provided.

During the year 123 cases of puerperal pyrexia were notified, 74 of which occurred in the practice of midwives. The latter were specially investigated by the Midwives' Inspectors and the causes of the rise of temperature were as follows :—

Influenza	...	...	...	...	20
Chill	...	...	...	...	5
General Condition	...	...	...	...	16
Retained Clot	...	...	...	...	1
Engorged Breasts	...	...	...	...	2
Forceps Delivery	...	...	...	...	3
Abortion	...	...	...	...	1
Retained Placenta	...	...	...	...	1
Septic Absorption	...	...	...	...	2
Appendicitis	...	...	...	...	1
Inflamed Leg	...	...	...	...	1
Post-Partum Hæmorrhage	...	...	...	...	1
Pneumonia	...	...	...	...	2
Constipation	...	...	...	...	3
Impacted Bowel	...	...	...	...	1
Pulmonary Embolism	...	...	...	...	1
Albádolens (Phlegmasia)	...	...	...	...	1
Mastitis	...	...	...	...	2
Heart Disease	...	...	...	...	1
Scarlet Fever	...	...	...	...	1
Salpingitis	...	...	...	...	1
Pleurisy	...	...	...	...	3
Pulmonary Tuberculosis	...	...	...	...	2
Acute Rheumatism	...	...	...	...	1
Sæpraemia	...	...	...	...	1

In the County Health Visiting Area the Committee have provided special facilities for a consultant to be called in by the notifying practitioner if necessary, and have arranged with the large hospitals in the County to take cases of puerperal pyrexia when required, and in those instances in which the patient is too ill to be moved a trained nurse is

sent to her home. The notifications from medical practitioners under the Puerperal Pyrexia Regulations were as follows :—

PUERPERAL PYREXIA NOTIFICATIONS, 1927.

	<i>In Health</i>		<i>Not in Health</i>		
	<i>Visiting Area.</i>		<i>Visiting Area.</i>		<i>Total</i>
Urban Districts ...	24	...	59	...	83
Rural Districts ...	27	...	13	...	40
					<hr/> 123 <hr/>

The notifications of puerperal fever, as has already been noted, are less than last year, for although the practitioner could notify a case of this kind, many have not done so, as the case has already been notified under the Puerperal Pyrexia Regulations. During the year 29 cases were notified in the Administrative County as follows :—

PUERPERAL FEVER NOTIFICATIONS, 1927.

	<i>In Health</i>		<i>Not in Health</i>		
	<i>Visiting Area.</i>		<i>Visiting Area.</i>		<i>Total</i>
Urban Districts ...	7	...	8	...	15
Rural Districts ...	6	...	8	...	14
					<hr/> 29 <hr/>

STILL-BIRTHS.—212 still-births were reported by midwives, associated with the following conditions :—

Albuminuria ...	...	...	...	7
Ante-Partum Hæmorrhage ...	...	...	...	14
Cord prolapse ...	...	...	...	12
Cord, round neck ...	...	...	...	8
Deformities ...	...	...	...	13
Difficult Labour ...	...	...	...	16
Fall and Shock ...	...	...	...	14
Ill-Nourished ...	...	...	...	4
Maceration ...	...	...	...	71
Malpresentation ...	...	...	...	9
Placenta Prævia ...	...	...	...	1
Premature ...	...	...	...	10
Spina Bifida ...	...	...	...	3
Unsatisfactory Condition of Mother ..				30

OPHTHALMIA NEONATORUM.—The accompanying Table shows the cases for the last five years, together with those treated at hospitals or at home, with the result obtained. It will be seen that out of 166 cases, 162 were completely cured, which is a very highly satisfactory result in view of the virulent nature of this disease. It will also be noted that only a small proportion of children were sent to hospital, 13 had to be received as in-patients, whilst in 18 cases out-patient treatment sufficed.

	CASES.			Vision un- impaired	Vision impaired	Total Blind- ness.	Deaths.
	Notified	Treated.					
		At Home	In Hospital				
1923	78	64	14	75	2	...	1
1924	109	89	20	107	1	...	1
1925	138	96	*42	135	1	...	1
1926	166	149	†17	162	3	...	1
1927	166	135	‡31	162	3	...	1

* One case removed from district; result not known.

† 12 In-Patients, 5 Out-Patients.

‡ 13 „ 18 „

W. D. CARRUTHERS,
County Medical Officer of Health.

Stafford,
August, 1928.

TABLES

Table showing Population, Number of Persons per Acre, Birth and Death-rates, as well as the Death-rates at all ages and among Children under 1 year, and the Death-rates from Zymotic Diseases, Tuberculosis, Diseases of the Respiratory Organs, &c.

URBAN.

District	Population at all ages		Numbers of Persons per acre	Birth-rate per 1000 of population	General mortality per 1000 of population	Standardized Death Rate	Mortality in children under one year per 1000 registered births	Zymotic mortality						Tuberculosis of Respiratory System	Other Tuberculous Diseases	Cancer, Malignant Disease	Bronchitis	Pneumonia (all forms)	Other Respiratory Diseases	Cirrhosis of Liver	Acute and Chronic Nephritis	Congenital Debility and Malformation; Premature Birth	
	Census 1921	Estimated to middle of 1927						Per 1000 of population															
								Enteric Fever	Smallpox	Measles	Scarlet Fever	Whooping Cough	Diphtheria										
Amblecote	3,182	3,011	4.5	16.6	13.9	...	60	...	...	...	...	0.33	0.66	...	0.66	0.33	1.33	1.33	...	...	0.66	0.33	
Audley	14,738	14,990	1.8	15.6	10.0	9.8	68	...	...	0.13	0.06	0.13	0.13	...	0.46	0.13	1.13	0.93	0.06	...	0.46	0.20	
Biddulph	7,931	8,502	1.5	18.2	10.1	...	71	...	...	...	...	...	0.23	6.4	0.35	0.47	1.17	0.23	0.11	...	...	0.35	
Bilston	27,556	30,820	16.5	23.8	15.0	15.4	112	...	...	0.13	0.03	0.45	0.13	15.0	1.23	0.26	1.17	1.59	2.69	0.09	0.03	0.35	0.68
Brierley Hill	12,479	13,350	13.1	19.8	13.8	13.6	86	...	...	...	...	0.15	0.52	7.5	0.67	0.15	1.50	1.87	1.72	0.15	0.15	0.45	0.67
Brownhills	18,248	20,690	3.3	20.0	9.6	9.9	84	...	...	0.14	...	0.43	0.05	...	0.43	0.09	0.82	0.67	1.16	0.19	0.05	0.34	0.92
Cannock	32,322	36,810	4.6	20.6	10.6	10.4	85	...	...	0.35	...	0.21	...	11.8	0.43	0.19	1.03	0.73	1.27	0.16	...	0.32	0.65
Coseley	24,213	25,720	6.9	20.4	12.8	12.8	76	...	...	0.15	...	0.35	0.04	13.3	0.50	0.15	0.85	1.16	2.14	0.19	0.04	0.07	0.50
Darlaston	18,208	19,020	20.8	22.8	12.4	13.0	103	...	...	0.05	...	0.15	0.05	4.6	0.68	0.15	1.47	0.68	1.52	0.15	...	0.15	0.99
*Heath Town	13,082	..	16.5	19.9	17.4	...	166	...	...	...	0.27	0.83	...	...	...	0.27	0.55	2.21	1.38	1.11	...	0.27	1.38
Kidsgrove	9,488	10,660	3.6	18.5	12.7	...	127	...	...	0.09	...	0.28	0.09	25.4	0.65	0.09	0.65	1.87	2.25	0.09	...	0.28	0.28
Leek	17,214	16,780	11.5	18.4	14.3	13.7	77	...	0.06	...	0.12	...	0.06	12.9	1.01	0.06	1.73	1.31	0.95	0.29	0.06	0.59	0.47
Lichfield	8,393	8,406	2.4	18.6	13.7	...	38	0.12	...	...	0.12	0.47	...	...	0.59	0.35	1.66	0.83	0.47	...	...	0.12	0.35
Newcastle	20,410	21,210	12.8	23.0	13.5	13.0	98	...	...	...	...	0.23	0.19	2.0	0.89	0.28	0.89	0.85	1.89	0.19	...	0.28	1.13
Perry Barr	2,700	3,915	0.9	16.1	7.4	...	63	...	...	...	...	...	...	...	0.25	0.25	1.02	0.25	1.02	0.25	...	0.25	0.76
Quarry Bank	7,224	8,723	13.1	17.6	9.3	...	26	...	...	...	...	...	0.11	...	0.80	...	0.68	0.68	0.68	0.11	...	0.57	0.23

Deaths occurring during the year 1927, classified according to Diseases and Localities,
together with Births occurring during the year.

URBAN.

DISTRICT.	Births	Deaths from all causes.	Deaths under 1 year	Enteric Fever	Smallpox	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Influenza	Encephalitis	Lethargia	Meningococcal Meningitis	Tuberculosis of Respiratory System	Other Tuberculous Diseases	Cancer, Malignant Disease	Rheumatic Fever	Diabetes	Cerebral Hæmorrhage, &c	Heart Disease	Arterio-Sclerosis	Bronchitis	Pneumonia (all forms)	Other Respiratory Diseases	Ulcer of Stomach or Duodenum	Diarrhœa, &c., (under 2 years)	Appendicitis and Typhlitis	Cirrhosis of Liver	Acute and Chronic Nephritis	Puerperal Sepsis	Other Accidents and Diseases of Pregnancy and Parturition	Congenital Debility and Malformation, Premature Birth	Suicide	Other Deaths from Violence	Other Defined Diseases	Diseases ill-defined or unknown		
Amblecote ..	50	42	3	1	2	4	2	1	4	2	4	...	3	2	1	4	4	4	...	1	2	1	1	1	8	...
Audley	234	151	16	2	1	2	2	11	7	2	17	7	23	5	14	5	14	4	4	1	1	...	3	...	7	3	1	8	28	...	
Biddulph ..	155	86	11	2	7	3	4	10	1	3	12	3	12	3	2	11	1	1	1	2	1	3	1	4	14	...	
Bilston	733	463	82	4	1	14	4	17	3	3	1	38	8	36	1	4	24	33	2	49	83	3	3	3	11	2	1	11	...	2	21	3	14	70	...	
Brierley Hill.	265	184	23	..	..	...	...	2	7	12	...	...	...	9	2	20	2	11	11	2	25	23	2	5	2	1	2	6	1	...	...	9	...	8	20	2
Brownhills ..	414	199	35	3	...	9	1	10	1	9	2	17	2	12	21	8	14	24	4	...	4	1	7	...	1	19	...	8	26	...	
Cannock	759	391	65	13	...	8	...	20	16	7	38	1	4	11	39	20	27	47	6	3	9	12	1	1	24	7	14	62	1	
Coseley	525	329	40	..	..	4	...	9	1	18	2	1	...	13	4	22	2	21	31	1	30	55	5	3	7	2	1	2	...	...	2	13	2	9	69	...
Darlaston ..	435	236	45	1	...	3	1	19	1	13	3	28	2	3	10	28	3	13	29	3	4	2	3	1	1	19	...	8	37	1	
*Heath Town	72	63	12	1	3	...	2	1	2	1	3	11	...	8	5	8	5	4	1	1	...	5	15	...	
Kidsgrove ..	197	136	25	..	..	1	...	3	1	4	...	...	...	7	1	7	1	3	15	11	20	24	24	1	1	5	...	...	...	3	...	3	3	6	15	1
Leek	309	241	24	..	1	...	2	...	1	21	1	1	1	17	1	29	1	11	28	7	22	16	16	5	2	4	...	1	10	1	...	8	...	4	46	1		
Lichfield ..	157	115	6	1	...	...	1	4	...	10	1	1	1	5	3	14	4	10	16	9	7	4	...	...	2	...	...	...	1	...	...	3	2	3	14	...
Newcastle ..	488	286	48	..	...	...	...	5	4	15	...	...	...	19	6	19	2	13	43	10	18	40	40	4	...	1	1	...	6	...	1	24	3	6	45	1
Perry Barr ..	63	29	4	..	...	...	...	...	...	1	...	...	...	1	1	4	...	1	3	2	1	4	4	1	...	...	...	...	1	...	...	3	...	3	2	...
Quarry Bank	154	81	4	..	...	...	...	...	1	4	...	...	...	7	...	6	...	2	13	5	6	6	6	1	3	...	...	...	5	...	...	2	...	6	14	...

* First quarter of year.

URBAN—continued

DISTRICT	Births	Deaths from all causes	Deaths under 1 year	Enteric Fever	Smallpox	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Influenza	Encephalitis	Lethargia	Meningococcal Meningitis	Tuberculosis of Respiratory System	Other Tuberculous Diseases	Cancer, Malignant Disease	Rheumatic Fever	Diabetes	Cerebral Haemorrhage, &c.	Heart Disease	Arterio-Sclerosis	Bronchitis	Pneumonia (all forms)	Other Respiratory Diseases	Ulcer of Stomach or Duodenum	Diarrhoea, &c. (under 2 years)	Appendicitis and Typhlitis	Chirrhosis of Liver	Acute and Chronic Nephritis	Puerperal Sepsis	Other Accidents and Diseases of Pregnancy and Parturition	Congenital Debility and Malformation	Suicides	Other Deaths from Violence	Other Defined Diseases	Diseases ill-defined or unknown	
Rowley Regis	790	442	55	...	...	6	...	2	1	52	..	..	1	31	10	41	..	2	32	42	22	27	39	9	5	1	2	..	16	2	1	25	7	12	54	...
Rugeley	106	60	4	...	...	...	...	...	...	1	1	...	7	2	2	2	...	5	13	2	5	1	...	...	...	...	...	...	...	1	...	3	1	4	10	...
Sedgley	405	235	28	...	...	...	...	3	2	20	..	..	1	13	2	26	..	3	16	25	3	22	23	2	1	1	2	..	6	1	..	13	2	6	42	...
Short Heath .	104	57	11	...	...	...	...	1	1	2	...	...	...	3	1	10	...	...	3	37	7	22	6	2	1	...	...	...	1	...	...	5	1	2	12	...
Stafford	455	288	22	...	...	1	...	3	1	10	...	...	...	20	4	32	4	6	22	37	7	22	16	8	1	2	1	3	3	2	..	9	3	9	62	...
Stone	108	79	7	...	...	...	...	...	1	5	...	...	...	5	1	10	...	...	7	12	2	9	2	...	...	...	...	...	3	...	...	5	...	1	16	...
Tamworth ..	166	118	16	...	...	...	...	...	1	6	...	...	...	3	2	14	...	...	12	11	9	7	10	2	...	4	2	..	1	1	1	3	1	3	25	...
Tettenhall ..	75	75	2	11	2	...	11	2	20	2	...	5	...	1	1	1	1	3	2	2	12	...
Tipton	841	498	92	...	...	9	...	10	1	22	4	...	...	31	14	37	2	3	17	42	6	24	79	7	4	10	1	2	6	1	...	41	6	15	103	1
Uttoxeter ...	107	65	5	...	...	...	...	...	...	...	...	...	...	4	4	7	...	1	1	8	4	5	8	1	...	...	...	2	...	...	...	4	1	2	11	...
Wednesbury..	684	417	69	1	...	5	...	3	...	44	...	...	...	37	12	28	...	3	9	41	20	34	52	4	3	7	...	...	8	4	2	22	2	10	66	...
Wednesfield .	186	70	6	...	...	...	...	2	...	4	1	...	...	1	1	5	...	1	1	10	1	10	6	1	1	1	...	...	...	...	...	4	...	...	20	...
Willenhall ..	441	285	46	...	...	...	...	30	1	16	...	...	...	22	3	27	1	...	10	30	5	18	29	4	2	3	...	1	8	3	1	18	1	3	49	...
Wolstanton .	549	355	41	...	...	2	...	4	2	10	2	...	...	26	7	30	...	6	18	54	23	34	41	3	4	4	1	1	9	...	2	15	2	9	43	3
Totals	10027	6076	847	2	1	51	6	121	38	378	17	6	371	109	553	16	51	300	677	198	483	692	83	52	76	22	15	144	18	16	327	52	180	1010	11		

DISTRICT	Population at all ages		Mean area per person in acres	Birth-rate per 1000 of population	General mortality per 1000 of population	Standardized Death Rate	Mortality in children under one year per 1000 registered births	Zymotic mortality						Tuberculosis of Respiratory System	Other Tuberculous Diseases	Cancer, Malignant Disease	Bronchitis	Pneumonia (all forms)	Other Respiratory Diseases	Cirrhosis of Liver	Acute and Chronic Nephritis	Congenital Debility and Malformation	Premature Birth
	Census 1921	Estimated to middle of 1927						Per 1000 of population															
								Enteric Fever	Smallpox	Measles	Scarlet Fever	Whooping Cough	Diphtheria											Diarrhoea, &c (under 2 years)
Blore Heath . . .	2,283	2,696	5.0	16.3	9.6	...	22	...	...	...	...	...	...	0.74	0.74	1.11	0.37	0.74	0.37	...	0.37	...	...
Cannock	21,551	21,330	1.4	24.3	12.9	12.1	63	...	...	0.09	0.04	0.56	0.23	1.9	0.33	0.18	1.31	0.65	0.93	0.09	...	0.23	0.65
Cheadle	28,454	26,560	2.0	18.9	11.5	10.7	61	...	...	...	...	...	...	2.0	0.56	0.41	1.24	0.86	0.71	...	0.03	0.22	0.83
Dudley	29	25	2.7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gnosall	4,634	4,679	6.1	18.3	13.4	...	46	...	...	...	...	...	...	...	1.07	...	0.64	0.42	1.07	...	...	0.21	0.42
Kingswinford . .	22,067	22,400	0.2	18.8	11.4	11.0	80	...	...	0.04	0.04	0.04	0.18	9.5	0.62	0.31	0.85	1.07	1.07	0.13	0.09	0.13	0.49
Leek	16,122	14,800	4.6	17.7	12.1	10.6	91	...	...	...	0.20	0.33	...	7.6	0.47	0.20	1.35	0.67	1.08	0.06	0.06	0.20	0.81
Lichfield	29,448	*32,550	2.2	16.7	10.4	9.3	57	0.03	...	0.03	0.03	0.15	...	3.5	0.40	0.15	1.20	0.77	0.67	0.12	...	0.18	0.52
Mayfield	3,993	3,805	6.4	13.9	12.1	...	75	...	...	...	...	0.26	...	...	0.26	...	0.79	0.79	0.52	...	...	0.26	0.26
Newcastle	6,327	6,113	3.1	18.1	11.9	...	36	...	...	...	...	...	0.16	...	0.49	...	1.96	0.49	0.65	...	...	1.14	0.16
Seisdon	16,816	16,200	2.6	17.4	9.8	8.2	71	...	...	...	...	0.18	0.06	3.5	0.06	0.18	1.42	0.55	0.68	0.18	0.06	0.18	0.61
Shifnal	689	671	8.1	11.9	22.3	...	125	...	...	...	...	...	...	...	...	...	1.49	4.47	...	...	...	...	...
(Staffs. por.)																							
Stafford	†11,029	9,403	5.8	15.4	10.3	8.7	82	...	...	...	...	0.32	...	...	0.21	0.10	1.17	0.64	0.64	0.10	0.10	0.32	0.53
Stone	14,500	12,300	5.2	15.8	13.2	10.9	71	...	...	0.08	...	0.08	0.08	5.1	0.48	0.32	1.54	0.57	0.57	0.08	...	0.08	0.65
Tamworth	5,359	5,901	3.6	17.6	10.6	...	38	...	...	...	0.34	...	...	...	0.67	...	0.17	1.69	0.34	...	...	0.34	0.51
(Staffs. por.)																							
Tutbury	8,908	8,964	2.9	15.9	13.0	...	56	...	...	...	...	0.11	...	7.0	0.55	0.33	0.67	0.78	0.78	0.22	...	0.44	0.33
Uttoxeter	8,295	7,933	6.0	14.8	12.3	...	59	...	...	...	...	...	...	8.4	0.25	0.25	1.01	0.50	0.75	0.25	...	...	0.50
Walsall	13,019	14,250	0.8	18.4	12.9	12.9	118	...	...	0.07	0.07	1.05	0.14	...	0.49	0.14	1.47	1.12	1.40	0.21	...	0.14	0.91
Totals & Averages	213,523	†210,580	2.9	18.0	11.7	...	69	0.00	...	0.03	0.04	0.22	0.06	3.6	0.44	0.22	1.18	0.79	0.82	0.11	0.03	0.23	0.60

* The birth-rate for Lichfield R.D. is calculated on an estimated population of 34,150.

† The mean birth-rate in the rural districts is calculated on an estimated population of 212,180.

‡ The mean birth-rate for the Census population of Stafford R.D. from 8,468 in 1911 to 11,029 in 1921 is accounted for by the temporary presence of the army barracks.

District.	Births	Deaths from all causes.	Deaths under 1 year.	Enteric Fever.	Smallpox	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria.	Influenza.	Encephalitis Lethargica.	Meningococcal Meningitis.	Tuberculosis of Respiratory system	Other Tuberculous Diseases.	Cancer, Malignant Disease.	Rheumatic Fever.	Diabetes.	Cerebral Hemorrhage.	Heart Disease.	Arterio Sclerosis.	Bronchitis.	Pneumonia (all forms).	Other Respiratory Diseases.	Ulcer of stomach or duodenum.	Diarrhoea, etc., (under 2 years).	Appendicitis and Typhlitis.	Cirrhosis of Liver.	Acute and Chronic Nephritis.	Puerperal Sepsis.	Other accidents & Diseases of Pregnancy & Parturition	Congenital Debility and Malformation, Premature Birth	Suicide.	Other deaths from Violence.	Other Defined Diseases.	Diseases ill-defined or unknown.		
Blore Heath..	44	26	1	1	1	1	1	1	1	2	1	1	2	2	3	3	3	3	3	3	1	2	1	1	1	1	1	1	1	1	1	1	1	1	8	1	
Cannock	518	276	33	33	33	2	1	12	5	14	1	1	7	4	28	1	4	20	60	3	14	20	2	2	1	1	1	5	1	1	1	14	1	13	41	1	
Cheadle	503	307	31	31	15	11	33	1	4	13	40	24	19	6	23	19	4	1	1	1	1	2	2	2	2	2	2	6	2	22	22	8	51	1			
Dudley
Gnosall	86	63	4	4	5	5	3	4	8	9	1	1	5	5	3	3	2	5	1	1	1	2	1	3	1	1	1	1	1	1	1	2	2	4	12	1	
Kingswinford	421	257	34	34	14	7	19	2	2	20	21	17	24	3	24	24	2	4	2	2	3	1	4	3	1	2	2	3	1	11	11	3	2	48	1		
Leek	263	179	24	24	7	3	20	4	11	26	53	21	25	4	16	16	1	2	1	1	3	1	1	3	1	1	1	3	1	12	12	7	28	1			
Lichfield ..	572	341	33	33	13	5	39	2	5	22	53	21	25	4	22	22	4	4	2	4	6	1	1	3	1	1	1	6	1	17	17	4	15	46	1		
Mayfield	53	46	4	4	1	1	3	1	5	3	9	1	5	2	2	2	2	2	2	2	1	3	2	1	1	1	1	1	1	2	1	1	1	14	1		
Newcastle ..	111	73	4	4	5	5	12	1	1	5	13	3	3	4	10	16	1	2	2	3	3	4	3	1	1	1	2	7	1	1	1	1	1	12	1		
Seisdon	282	159	20	20	1	3	23	1	1	12	25	8	9	11	11	11	3	1	1	1	8	9	11	3	1	1	1	3	1	10	10	1	11	22	1		
Shifnal	8	15	1	1	1	1	1	1	1	3	1	3	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
(Staffs. por.)																																					
Stafford	145	97	12	12	2	1	11	1	7	21	21	4	6	6	6	6	1	1	1	1	4	6	6	1	1	1	1	3	1	5	5	5	4	15	1		
Stone	195	163	14	14	6	4	19	1	9	30	4	7	7	1	7	7	1	3	1	4	7	7	7	1	1	1	1	1	1	1	8	8	1	7	38	1	
Tamworth ..	104	63	4	4	4	4	1	1	5	5	5	5	10	2	10	2	2	2	2	5	5	10	2	2	2	2	2	2	2	1	1	3	1	5	8	1	
(Staffs. por.)																																					
Tutbury	143	117	8	8	5	5	6	1	12	20	8	7	7	2	1	1	1	1	1	8	7	7	2	2	1	1	1	4	1	3	3	1	2	27	1		
Uttoxeter ..	118	98	7	7	2	2	8	1	8	16	6	4	6	2	2	2	2	2	2	6	6	4	6	2	2	2	2	1	1	4	4	1	4	24	1		
Walsall	263	184	31	31	7	2	21	1	11	17	17	2	16	20	20	20	3	3	3	2	2	2	2	2	2	2	2	2	2	2	13	13	8	35	1		
Totals	3829	2464	265	265	94	47	250	10	27	165	370	117	167	173	23	18	14	16	6	48	7	11	126	16	89	429	2	35	8	35	71	2	2	2	2		

Table showing the number of cases of certain Infectious Diseases notified in each sanitary area during the year 1927, and the Attack-Rates per 1,000 of the population.

URBAN.

DISTRICT.	Estimated Population in the middle of 1927.	Small-pox.		Scarlet Fever.		Diphtheria.		Enteric Fever.		Puerperal Fever.		Erysipelas.		Con- tinued Fever Cases.	Cerebro- spinal Fever Cases.	Polio- myelitis Cases.	Enceph- alitis Lethar- gica. Cases.	Puer- peral Pyrexia Cases.
		Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate					
Amblecote ..	3,011	..	..	2	0.66	6	1.99	..	..	..	..	..	...	..	..	..	..	..
Audley	14,990	..	..	43	2.86	20	1.33	..	..	2	0.13	12	0.80	..	..	1	...	7
Biddulph ..	8,502	..	..	13	1.53	42	4.94	..	..	..	..	5	0.59	..	..	..	...	..
Bilston	30,820	1	0.03	41	1.33	26	0.84	..	..	1	0.03	11	0.35	..	..	..	..	1
Brierley Hill ..	13,350	..	..	12	0.90	40	2.99	1	0.07	1	0.07	7	0.52	...	..	..	..	4
Brownhills ..	20,690	..	..	54	2.61	15	0.72	1	0.05	3	0.14	8	0.38	...	..	..	...	1
Cannock	36,810	..	..	72	1.95	23	0.62	1	0.02	2	0.05	17	0.46	..	..	1	..	5
Coseley	25,720	..	..	21	0.81	18	0.70	..	..	..	..	3	0.11	..	..	..	3	4
Darlaston ..	19,020	..	..	21	1.10	19	1.00	1	0.05	..	..	10	0.52	...	..	..	1	5
*Heath Town	...	..	..	12	3.32	1	0.27	..	..	..	..	1	0.27	..	..	..	..	..
Kidsgrove ..	10,660	..	..	32	3.00	39	3.66	2	0.18	..	...	5	0.47	...	..	...	1	6
Leek	16,780	2	0.12	90	5.36	33	1.96	..	..	..	..	9	0.53	...	..	..	1	3
Lichfield ..	8,406	..	..	39	4.63	3	0.35	1	0.12	..	..	1	0.12	..	..	...	1	1
Newcastle ..	21,210	..	..	32	1.51	14	0.66	...	..	1	0.04	2	0.09	..	..	..	...	1
Perry Barr ..	3,915	..	..	3	0.76	3	0.76	..	...	..	..	..	...	..	..	..	...	..
Quarry Bank	8,723	..	..	15	1.72	22	2.52	1	0.11	..	...	4	0.46	...	..	1	...	2

* First quarter of year.

URBAN—continued.

DISTRICT.	Estimated Population in the middle of 1927	Small-pox.		Scarlet Fever.		Diphtheria.		Enteric Fever.		Puerperal Fever.		Erysipelas.		Con- tinued Fever Cases.	Cerebro- spinal Fever Cases.	Polio- myelitis Cases.	Enceph- alitis Lethar- gica. Cases.	Puer- peral pyrexia Cases.
		Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate					
Rowley Regis	42,690	..	..	93	2.18	33	0.77	..	..	2	0.04	12	0.28	..	..	..	...	11
Rugeley	5,561	..	..	3	0.54	..	..	..	...	..	..	2	0.36	..	..	1	1	1
Sedgley	19,940	..	..	21	1.05	17	0.85	..	..	1	0.05	18	0.90	..	..	..	..	2
Short Heath .	4,935	..	..	5	1.01	10	2.02	1	0.20	..	...	1	0.20	..	...	..	..	2
Stafford	28,830	..	..	25	0.86	22	0.76	..	..	1	0.03	13	0.45	..	..	1	..	8
Stone	5,894	..	..	1	0.17	3	0.51	..	..	..	..	1	0.17	..	..	..	...	1
Tamworth ..	8,018	..	..	14	1.74	15	1.87	..	..	..	...	3	0.37	...	..	..	..	1
Tettenhall ..	5,527	..	..	7	1.26	3	0.54	...	..	..	..	2	0.36	..	..	..	...	..
Tipton	37,300	..	..	23	0.61	27	0.72	..	..	..	..	15	0.40	..	..	..	5	5
Uttoxeter ..	5,629	..	..	1	0.17	..	..	..	..	..	..	..	..	..	..	..	...	..
Wednesbury..	33,560	..	...	62	1.84	10	0.29	1	0.03	..	...	19	0.56	...	..	..	1	6
Wednesfield ..	8,639	..	..	7	0.81	2	0.23	..	..	..	..	..	..	..	..	..	..	..
Willenhall ..	21,850	..	..	30	1.37	14	0.64	..	...	1	0.04	11	0.50	..	..	...	..	1
Wolstanton ..	29,740	..	..	68	2.28	14	0.47	..	...	..	..	8	0.27	..	..	...	1	5

1.—Legitimate. I.—Illegitimate. *Districts or parts of districts worked by emergency nurses

(a) One H.V. also serves part of Leek R.D.

(b) Also serves part of Walsall R.D.

(c) Also serves part of Willenhall U.D.

* Absorbed by Wolverhampton County Borough. 1st April, 1927.

* Absorbed by Wolverhampton County Borough. 1st April, 1927.

